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# The Journal of the Michigan State Medical Society

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## Original Articles

### THE TREATMENT OF SYPHILIS AND PARASYPHILIS OF THE NERVOUS SYSTEM\*

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The relation of syphilis to the occurrence of nervous disease has ever given rise to extensive and intensive study. To ponder all its vast and various aspects would mean to commit oneself to a task truly Herculean and fitting neither the title nor the purpose of these remarks. One may be pardoned, however, focusing the attention, by way of introduction, upon a few bare yet basic facts, which, when categorically discussed, may assist to an intelligent conception of the therapy in syphilitic and parasyphilitic affections of the nervous system. The first of these to require re-emphasis is that syphilis of the nervous system is never or hardly ever syphilis of nerve tissue. The specific lesion of the nervous system, be it understood, is presumably microbic in origin, essentially neoplastic in type, attacking primarily the vascular and interstitial structures, and only secondarily encroaching upon the nerve cell and fiber, disturbing its function and event-

ually destroying it, through local tissue death. By the term "neoplastic" it is not intended to convey the idea, erroneously held by many, that all or nearly all specific lesions are veritable tumor masses, gummata, syphilomata of more than appreciable size. On the contrary, the term includes or, better said, implies simple inflammations, cellular infiltrates, exudates and the smallest of nodular or gummy excrescences. An allusion to cerebral syphilis, for instance, should not conjure up the sole image of a large solitary tumor, except when other factors in the variant pathology of lues have been dismissed as untenable or improbable. The artery that supplies nerve tissue proper, the neuroglia that supports it, the membrane that shields it, play rôles not to be despised in the causation of nerve cell necrosis. Stating it somewhat differently: The morbid processes underlying the polymorphous symptomatology of syphilis of the nervous system in order of their importance and frequency are: (1) Syphilitic arteritis; (2) syph-

\*Read before the Wayne County Medical Society, at Detroit, November 9, 1908.

ilitic meningitis (inclusive of cranial nerves); (3) gummata. Syphilis of the nerves may be said to occur, but it is rare—very rare indeed. Just what determines that the nervous system should become involved and which part of it, we have no way of knowing, but in view of its protozoon etiology the explanation is at hand that (1) the spirocheta elaborates a virus of variable toxicity, having a special affinity for nerve structures, or (2) the nerve tissues of certain individuals have a lessened resistance for certain neurotoxins in the virus.

Of all the organic systems, the nervous system pays the heaviest tribute to the "tertiary" period of syphilis, and this assertion brings me to the point of referring briefly to the misconception by not a few of the word "tertiary." Be it observed that the word "tertiary" bears no relation to the time interval between the acquisition of chancre and the later manifestations of the disease; it merely emphasizes the kind of lesion. Those lesions of syphilis which are local and as such destructive of tissue are properly called tertiary. It matters not at all whether syphilis of the brain or cord follows the chancre as early as eight weeks, or as late as twenty years—it yet remains a "tertiary" phase of the disease. It is quite true that clinical experience has taught neurologists to believe that a majority of the cases of nervous syphilis are destined to occur within three to five years from the date of primary infection, with the incidence steadily decreasing after that, but such a chronologic criterion need not render a diagnosis doubtful when made at even a much later period.

These relations clear, it may be said in summary that, when disease of the nervous system has its *origin* in syphilis, is in its pathology of the *nature* of syphilis amenable and responsive to the therapy of syphilis, then we are justified

in postulating syphilis of the nervous system.

And what constitutes parasymphilitis? When *nerve elements proper*, that is cells and fibers, undergo *degeneration a initio*, a considerable period of time *after* syphilitic infection has occurred, as is indeed the case, we are disposed to regard that process as parasymphilitic.

The parasymphilitic diseases, so designated by Fournier, chief of which are tabes, general paresis, and a combination of the two, tabo-paresis, are in all probability induced in some manner by syphilis, but reveal a pathology unlike that of nerve syphilis, and are not prone to succumb to specific therapy in the sense that does syphilis. I do not, however, share in the belief that the pathology is totally dissimilar to that of syphilis, or that specific treatment is wholly contraindicated, for I am familiar with the occurrence of tertiary lesions in frank tabes and paresis, and have in certain cases, particularly of the former, noted the good effect of specific treatment—but of this I shall say more presently.

In the light of recent investigations and contributions to the syphilis problem, there is good cause to predict that the etiologic and therapeutic position of the disease will be greatly strengthened by the discovery of the spirocheta pallida by Schaudinn and Hoffmann, and the sero-diagnostic reaction of Wassermann. The well-nigh constant demonstration of the former in the lesions of syphilis and the invariable positive reaction of the latter in individuals acknowledging to earlier infection would seem to have placed these newer criteria well beyond the sphere of speculation and doubt. That the spirocheta pallida appears not only in the virus of the primary sore, papule and gumma, but has been demonstrated by Hoffman on the inner wall of a cerebral vessel showing syphilitic arteritis is a point worthy



of note and not without its direct bearing upon treatment.

Because of its field of application in syphilis of the nervous system merely a word in passing about the Wasserman test, which aims to ascertain the solubility or insolubility of suspect blood when admixed in a test tube with an already prepared serum formula. If the suspect blood is soluble, it means that syphilis of reaction is absent; if the blood remain insoluble, it means that syphilis of reaction is present; in other words, solubility means a negative and insolubility a positive test.

In some of the cases of nerve syphilis and parasyphilis recently under my care, and in others observed by my colleagues, this test was made, and with the laboratory kept in ignorance of the clinical diagnosis and patients' confession of syphilis, it in every instance returned a verdict of "positive." From the literature, recording to date a vast number of cases, in which the test has been used to confirm antecedent syphilis, one gains the impression that we may be called upon to again revise our present notions of syphilis toxins and parasyphilis. The fact that the Wasserman test has been positive in seventy per cent of tabes cases and ninety per cent of general paresis lends force to the argument presented some time ago by Lesser, Bose and others that the late manifestations of degeneration of the nervous system caused by the virus of syphilis may rightfully be construed as a fourth stage of syphilis. Many of the results with antisiphilitic remedies would seem to negative this contention, but, on the other hand, some of the experiences with mercury and iodides in checking the progress of these diseases would tend to support the view.

The test is surely full of promise where it is desirable and even imperative to make the early diagnosis in a

doubtful case, and institute prompt treatment.

Nowhere are we more in need of this direction than in cases of latent or denied syphilis presenting symptoms suggestive of brain tumor or brain syphilis. The therapeutic test for so long applied with watchful expectancy to make the diagnosis in these cases, will then fall into disuse.

#### TREATMENT.

In the matter of treating nerve syphilis and parasyphilis, we encounter a diversity of opinion that is but the natural sequence of a lack of fuller information all along the line of etiology and pathology. It may be well first to allude to some well-established facts concerning several methods of treatment, obtrude some personal experiences, and conclude with a resumé that is in consonance with the best and latest knowledge we have acquired.

If, for the purpose of completeness, I refer to a positive prophylaxis against syphilis of the nervous system, I must of necessity mean the accomplishment of an ideal prophylaxis against the primary sore, with the aid in one form or another of an antisiphilitic vaccine. Whereas this seems far from realization, yet the experiments of Metchnikoff and Roux are indicative of a scientific preoccupation in this direction. Mere mention of their work seems in place here, also because of the calomel ointment (calomel, one part, to lanolin, three parts), which they advocate as a lubricant prophylactic to be applied to the genitalia immediately or within an hour after suspicious intercourse. The authors remark that in their experiments this remedy has afforded immunity against primary infection, and accordingly it has been issued to the army by the Secretary of War in France as a prophylactic measure against venereal disease.

The initial lesion once acquired, nothing short of a prompt, efficient and sufficiently long-continued course of mercury and iodides is indicated; when well accomplished, the dire tertiary consequences to the nervous system will be prevented in the majority of cases. This, I think, none may doubt, since it has been estimated from very large and convincing statistics that when *properly* treated perhaps ninety per cent of the cases get well and remain so. A retrospect of the cases which the neurologist is privileged to see forces the conclusion, however, that the cases have been treated either imperfectly, improperly, or not at all.

What constitutes, from the neurologic view-point, the best treatment in these cases?

Extremely urgent instances aside, I think it is the consensus of opinion among neurologists that the inunction method, the *Schmierkur* of the Germans, has on the whole given the best satisfaction in nerve syphilis. It may be inferior to the oral, hypodermic or intravenous method in point of rapidity and cleanliness, but it fulfills most of the demands made upon it in most of the cases, is simple of application, less prone to produce salivation, and obviates gastrointestinal distress. I believe that to have the unguentum hydrargyri dispensed in an exact dosage in wax papers, with written instructions to the patient for its use, contributes greatly toward the efficiency of the method. It has been my custom to prescribe unguentum hydrargyri, one-half to one drachm, to be rubbed nightly by the patients themselves when they are able to, and the specifications call for one thorough rubbing on a different non-hairy, flexor surface each night for five nights, this to be followed by a warm cleansing bath on the sixth, a rest on the seventh, and then a fresh series of five rubbings on successive nights, with interruptions of bath and rest as before.

The number of such series required is variable, four having sufficed in some of my cases, and eight in others. In private practice I have found most of the patients very ill at ease over the denial of daily baths, and after making concessions have come to believe that a short cleansing bath daily in the morning is no serious infraction upon the technic. In two of the considerable number of cases in my records I met with non-absorbing skins, which no amount of rubbing could affect, and after a brief trial, resort was had to the deep injections. What I have said of the officinal unguentum hydrargyri applies to the vasogen preparations containing from 25 to 33 per cent of mercury. Occasionally one meets with circumstances where it is desirable to suppress the real facts surrounding a case of lues, as in the congenital types of the disease, and here antispecifics in agreeable disguise may be given in the form of colloid calomel (calomelol), used as calomelol salve or unguentum Heyden, which contains an additional 2 per cent of free mercury (Abt).

When resorption from skin surfaces has proven slow, I suggest that the site of inunction be previously prepared by cleansing with soap and warm water, then alcohol or ether, and complete this toilet by the application of a tight flannel bandage over the part rubbed.

With these qualifications the endermic administration of mercury has given me most gratifying results. The symptoms of brain syphilis will appear less ominous I think if we appreciate that *mercury* in large enough doses constitutes the remedy *par excellence*. It is mercury that annihilates the *spirocheta pallida*, and if, as has been demonstrated, this protozoon may reside in the cerebral vessel walls of the syphilitic, then it is the mercurials that are cardinally indicated and iodides but the essential adjuncts in the therapeutic scheme.

So much depends upon the pathology



in each case that generalizations as to the degree of recovery are quite difficult to formulate. The area of softening in the brain resulting from the complete exclusion of a cerebral terminal artery is not likely to be irrigated back to life, nor will the brain cells compressed in a patch of scar tissue, reminiscent of a destructive gumma, derive sustenance and potentiality from all the mercury and iodides that can be safely borne.

Small wonder then that our disappointments are not a few. The lesson to be learned from this class of cases is that treatment should not only be *adequate*, but *timely*. There are types of brain syphilis which carry a patient to dissolution in spite of the most ideal therapeutic premises, but happily they are rare. In cerebral lesions the results of treatment are sometimes marvelous, but semi and complete failures are quite more numerous than cures. In spinal syphilis the proportion of failures is far greater than the successes.

When it seems necessary to get quick and complete control of a syphilitic lesion, initiated, for instance, by a single convulsive (epileptiform) seizure, the inunction treatment may well be waived in behalf of the more rapid administration of mercury by the deep intramuscular injection. I have no hesitancy in stating a preference for this method at *critical* periods in the disease. When it is intended to establish reservoirs of mercury in the deep muscular tissues from which slow resorption takes place, the insoluble preparations, such as calomel and the salicylate of mercury suspended in sterile oil or lanolin are used. It is maintained by Gottheil, who is the most ardent advocate of insoluble mercurials in this country, that they are free from danger, painless and of greater convenience to the patient because of longer periods intervening between injections. The controversy that has been waged in dermatologic circles con-

cerning the advantages or disadvantages of the soluble versus the insoluble mercurials need not receive extended mention here, but I have found that the injection of insoluble mercurials in several cases caused quite as much pain as is experienced with the soluble corrosive sublimate. The dangers arising from the deposits of mercury located in the deep tissues seem to me very real ones, and for this reason I have been content to use exclusively the hypodermics of corrosive sublimate in doses varying from 1/12 to 1/4 grains injected every second or third day. Soreness in the gluteal muscle masses is quite sure to follow, but at its worst it is transitory. The danger of thrombosis or embolism by penetrating a vessel is not great in these regions, but the remote possibility of so serious an accident should lead to great precaution in the technic, which it is needless to add includes rigid asepsis.

The vast majority of syphilitic cases in this country are subjected to the oral administration of mercurials, perhaps because it is convenient, and favors concealment of the patient's disease. This method, with its tendency to produce gastro-intestinal disturbance, stomatitis and diarrhea, is not free from serious objections, and in neurologic practice is the least dependable and therefore the least favored of all the accepted methods. If, for a particular reason, it seems indicated, the protiodid, grs. 1/8 to 1/3, or the hydrargyrum tannicum oxydulatum (Lustgarten), grs. 2 to 4 in pill form may be given after meals.

Of recent years the intravenous injections of mercury have been suggested, and one can understand how, in the severe, rampant and fulminating types of the disease, they would act with great promptness and certainty, but the risk of thrombophlebitis and embolism, in my opinion, outweighs all considerations in their favor. I concede their



place in therapy, but have not as yet availed myself of their use.

In the ambition to check and control nerve syphilis, mercury in any of its forms will surely do harm if given injudiciously, meaning in doses either too large or too continuously. The dangers of chronic mercurialism require no emphasis here, but I have so frequently seen flagrant neglect of the teeth, gums and mouth, that it seems pertinent to reiterate the use of mouth washes, tooth powders and gargles three times daily after eating, to preserve oral cleanliness and prevent stomatitis.

In treating syphilis of the nervous system, it has been customary to administer the iodides conjointly with the mercury, but the neurologist with experience will, I think, ascribe his good results to the use of mercury and not iodides. This, however, is not equivalent to saying that the iodides do no good, for in truth they are of inestimable value, and the best evidence of this fact is the disposition on the part of American neurologists to give massive doses, from two to four hundred grains daily. On the continent small doses of from thirty to sixty grains daily are advocated, but it has always seemed ridiculous to me to be prejudiced by the size of a dose alone. It has been my principle to give enough, plenty, and then some more if that did not suffice. There has been a good deal of fastidiousness in the matter of iodide administration, in which, at one time or another, we all have been guilty of participation. I have noted the best results with the saturated solution of potassium iodide in ascending doses from fifteen to as high as one hundred drops, three times daily, given after meals, well diluted in water, vichy or seltzer, or milk. Sodium iodide has found favor in nerve syphilis, and is said to contain more iodine, be less irritating to the stomach and less prone to

produce iodism. Iodism, except in idiosyncratic individuals, is best prevented by large dilutions of the drug in milk or aerated water, and especially where three to four hundred grains constitute the daily dose, it is well to dissolve the entire amount in a quart or more, to be taken in divided doses during the twenty-four hours, thus avoiding gastric distress and other ill-effects. Iodo-nucleoid, a preparation containing 23 per cent iodine, is a pharmaceutical refinement of iodide possessed of great merit, and may at any time be given in a dosage of from five, twenty, and even sixty grains, three times daily, for a long period of time without giving rise, except in very rare instances, to gastric distress or other familiar signs of iodism. I have given it repeatedly in doses of sixty to one hundred grains, three and four times daily, without apparent ill-effect, whereas ten-drop doses of the saturated solution for the same patient were not at all well tolerated. Iodalbin in similar doses is very readily assimilated, and tends to act with good effect. It is advisable to reduce excessively large dosage after a month, and then continue for eight to ten weeks with fifteen grains two or three times daily, as the condition may demand. Warm baths, copious water-drinking and free catharsis will keep the elimination at the point necessary to prevent iodism. When the first energetic treatment has done all that could be expected of it, patients should be encouraged to take a course of iodide and mercury every six months for five years, and some specific treatment is indicated for a short period every year for the rest of their lives. It is a mistake to think that the exhibition of antispecifics in syphilis puts an end to the medical obligations toward a case, for we not infrequently encounter states of malnutrition, even cachexia, and profound anemias which require the most careful and judicious

employment of rest, diet, hydrotherapy, fresh air, and alterative tonic treatment. In the past few years the French have treated cases of both primary syphilis and syphilis of the nervous system, with atoxyl, an arsenical preparation used subcutaneously in doses of about one-half to two grains, two and three times daily. There is a great diversity of opinion as to the utility of this alterative remedy. I have resorted to its use in cases of anemia, neurasthenia, and in a few instances of nerve syphilis, but am not at all convinced of its superiority over other arsenical preparations, such as sodium cacodylate or the liquor arsenicalis.

Germane to any discussion of parasyphilis and in keeping with the limits of this paper, I think it well to outline only a few of the essentials in the treatment of the two affections, tabes dorsalis and general paresis. In a prefatory way, I might say that the very slow progress and tendency to spontaneous remission in tabes dorsalis makes it impractical and well-nigh impossible to suggest a therapy for certain "stages," such as the pre-ataxic, ataxic, paralytic, and so forth, which are merely convenient and now obsolete descriptive terms. It should be appreciated that from the very first this disease is incurable, progressive, often remaining stationary for a long time in the benign and milder forms, and yet capable of marked improvement following the exhibition of diverse *reasonable* therapeutic measures employed singly or in such combination as to meet the requirements of each case. There should be no hesitancy, however, in acknowledging that, on the whole, only a minority of the cases are influenced in their course or arrested in their development.

Recognizing tabes as a late sequel of syphilis, it is only natural and logical to ask, Will the prompt and energetic treatment of the antecedent syphilis

diminish the liability to tabes? Only the most extensive and exhaustive inquiry can establish the precedent for opinion on this point. Two quotations are worthy of mention. Neisser (*Deut. Med. Woch.*, 1902) has tabulated 455 cases of tabes; 254 (57%) had received no primary antiluetic treatment; 18 (1¼%) were adequately treated, and 173 (39%) inadequately. Schuster (*Deut. Med. Woch.*, Dec., 1907), in a critical analysis of his own cases and those of others, arrives at quite opposite conclusions, maintaining that (1) the clinical average of tabes and paresis is identical, whether antecedent syphilis has been treated with mercury or not. (2) The metasymphilitic nerve sequelæ do not appear later in the patients treated with mercury than in those untreated. (3) The beneficial influence of antispecific therapy for the prevention of parasyphilitic nerve lesions is thus far not convincingly proven.

In our present state of knowledge extreme pro and con views will continue to enliven the pages of our literature on this subject, but from such sources as Erb, Fournier, Neisser and Leredde I borrow the confirmation to my own observations of about one hundred tabetics, and venture the opinion, *firstly, that adequate antisymphilitic therapy does greatly diminish the liability to greater tabes, and, secondly, that all forms of syphilis, especially the milder ones, those treated either indifferently or not at all, should and must be held in higher therapeutic regard.*

The diagnosis of tabes once established, neurologists are again confronted with the question as to the propriety of antispecific treatment, and again are reminded of an ardent controversy that has been carried on for many years, and is still *sub judice*.

Many neurologists of experience accept as valuable the administration of mercury and iodides in tabes, by some they are liberally discounted, and by



others again, absolutely discredited. I recall cases, and they were nearly always the ones in which the interval between lues and tabes was short (at or under five years), that showed marked improvement shortly after and even during the exhibition of mercurials. Ataxia was greatly benefited, incontinence checked, pains controlled, vision improved, optic atrophy retarded and the charted fields of vision restored to near normal. A second group of cases has been wholly unresponsive, and a third I have thought were made distinctly worse by specifics. For this therapeutic variability there is, so far as I know, no adequate explanation, but it prompts a belief not inconsistent with pathologic facts, that the early cases presented tissue changes of *nerve syphilis together with those of tabes, and these were favorably influenced by therapy*. The cases in which treatment was badly borne and wholly without benefit were those well-advanced, of long standing, associated with emaciation, cachexia or grave anemia. From out of the increasing mass of contentions, I derive some comfort from the following attitude: In tabes (1) antispitics should be resorted to in the *early cases and early in these cases*, for then they are capable of doing good. (2) Antispitics are inert in many cases and positively harmful in others. (3) The plan of specific treatment is much the same as that heretofore mentioned, and contemplates the use of both mercury and iodides.

Mindful of the undue length of this paper, I shall, with your permission, omit all reference to the care of the bladder, the control of lancinating pains, the crises, and so forth, but pass on to a moment's reflection of *ataxia*. This most important and distressing symptom of tabes has for years received careful consideration and study, chiefly from Frenkel, of Heiden, who finally was able to formulate a plan of treatment for the inco-

ordination now known as Frenkel's re-education method which postulates the "necessity of learning by systematic practice coördinated and proper movements in place of ataxic ones." A perfect system of graduated exercises, first simple and later more complicated, is performed every day for five minutes, with a rest period of five minutes following. Patients are directed to intelligently and perseveringly practice certain movements and steps in many directions until they can do them correctly and with satisfaction and comfort to themselves. For the bed-ridden patients exercises of flexion, extension, abduction and adduction should be performed in the prone position, with deliberation and exactness. Such practice results in a most gratifying improvement of gait and station in patients who for several years may have been utterly helpless. I have had occasion to observe the most astonishing feats of locomotion even after a few months of these exercises, but the conviction has grown upon me that strict adherence by the patient to the highly complicated plan of Frenkel is not essential, for I have seen most marked improvement follow my simpler suggestion that exercises be done in a hop-scotch, chalked out on the bedroom floor. A pattern parquet floor will suffice, and the seams in the carpet or cracks in the sidewalk will answer the purpose, provided the maneuvers are planned to meet the requirements of each case, and the proper patience is observed in their execution. The inference to be drawn, then, is that the principle of the *Frenkel treatment is an excellent one, but unvarying obedience to a single formulated plan or system of exercises is not necessary for the attainment of good co-ordination*.

A factor contributing not a little to ataxia of the lower extremities is *hypotonia*, which, when present in the musculature of the foot tends to destroy its



long arch and give rise to pronation. A correction of the faulty mechanism of the foot by a shoe modified to meet the individual requirements has in three of my cases, together with the Frenkel exercises, offered the most favorable treatment for marked incoördination. Before leaving this topic, I desire to emphasize that in cases presenting ataxia of very acute onset and rapid progress, attended with great weakness and debility—the so-called *acute tabes*—it would be most reprehensible to suggest anything but absolute bed-rest and quiet.

It is sometimes very difficult to decide whether or not a patient should know his true condition, and be apprised of it in terms of locomotor ataxia or tabes. In being too blunt in letting a patient know the truth of his plight, the physician sometimes commits a grievous error. Much will depend upon the temperament of the patient, but in any event he may be told that he has some chronic spinal disorder, capable of control, and relief by judicious and careful treatment. Unpleasant psychic shocks are more than most tabetics can gracefully bear. It is indicated in this, as in all severe chronic conditions, to practice a mental therapy by virtue of which the patient may remain hopeful, encouraged, and stimulated to activity and obedience in the matter of taking proper care of self. This is no idle play of words, but an attempt to admonish the therapist in a matter of which he is either wilfully neglectful or woefully ill-advised. I know of tabes cases in which a swift and sudden decline could be attributed to no other cause half so readily as to psychotherapeutic indifference and disregard, and I know of others again whose every advance and gain was merely the reflection of a well-thought-out plan of mental support and suggestion. A patient should be made to change his occupation, if that were necessary or desirable, and should not want

for the constant direction and supervision of his working and resting hours. The psychic side of the tabetic must never be lost sight of.

The certainty with which the prediction of dissolution can be made in general paresis would seem to make any references to the effect or non-effect of treatment quite superfluous, but the casual relation to syphilis again brings to mind a few points of the controversial order worthy of passing comment. More difficult even than in tabes is it to say that this or that case of paresis has improved under treatment for syphilis. But the same reason that prompts my use of mercury and iodides in the early stages of tabes, in the hope of influencing pathological changes of active syphilis, inclines me to their administration in the incipient stage of paresis. I think that all alienists can record a few instances of long remissions in paresis which at first thought are ascribed to specifics, but in not a few marked improvement is the result of all measures except those of specifics. The tendency to discountenance the importance of syphilis in subsequently developing paresis is best seen in the efforts of the Scottish school (and in this country by the researches of O'Brien) to identify a diphtheroid bacillus and mixed toxic infection as the cause, and then raise the question of serum treatment. The investigations thus far presented are interesting, but, in my opinion, far from convincing.

I think I need not dwell upon the necessity for isolation, institutional regime with its approved methods of nursing, hydrotherapy, exercise and feeding. Those who have seen the mental, moral and physical degeneration of the paretic progress steadily to the point of total oblivion will unhesitatingly acknowledge the rôle of the sanitarium and asylum in the life of these unfortunates.

In having brought this topic of perennial interest to your notice, I have sought to do little more than assemble in the light of latter day research, the larger facts and broader opinions, and thus make them the targets for discussion. To epitomize:

(1) Syphilis and parasyphilis of the nervous system continue to stand in direct and indirect causal relation to primary syphilis, although their nosologic position is very likely to undergo revision if the Schaudin discovery and sero-diagnostic values of today stand the test of time and further development.

2. The therapeutic position, it is hoped, will also share in this signal advance, but in the expectant interval it is well

to insist that neither a routine nor haphazard administration of antispecifics is commendable.

3. Treatment to be intelligent must meet the requirements of each case, with due regard for the many collateral, chiefly supportive measures.

4. Antispecifics when indicated in these conditions mean *mercury and iodides*.

5. In the vast majority of cases occurring in neurologic practice mercury by inunction is the method of choice.

6. The "Fränkel exercises" treatment for the ataxia of tabes loses none of its efficiency if a departure is taken from the original complex plan to a simpler one.

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**Chinese College of Medicine.**—What are reported as preliminary plans for the establishment of a medical college in China, contains the startling announcement that a 12-year course is contemplated.

The report states that "In accordance with Chinese ideas the course is to be divided into three years of old Chinese medical practice and six years of modern western training. At the end of these nine years there is to be a thorough examination and then three more years of study and trial practice shall be demanded before the students shall be qualified doctors. This examination must also be passed by people who are now practicing on certificates from existing medical schools. No one who does not hold a literary rank of a fixed grade shall be allowed to take these examinations, regardless of where he studied. Compensation to be paid by the students who will study at this new school is to be

fixed at a future meeting of men appointed to have charge of the institute."

Were we to be given our choice between the abbreviated courses of some of the late departed (but not lamented) "diploma mills" in our country, and a 12-year period of study before independent medical work were our privilege, we would undoubtedly prefer the latter—other things being equal. But this last condition means many things, not the least important of which is the individual's ability to devote 12 potential years to non-income bearing work. This alone would prove a tremendous barrier to the practicability of such a scheme—not that splendidly equipped practitioners would not be the product of such an institution.

However, any consideration given the matter is as yet mere talk at random, because thus far the above communication is the only information at our command.—*Ex.*

## PERSONAL EXPERIENCE WITH PROSTATITIS\*

FREDERICK W. ROBBINS, A.M., M.D.,

Detroit.

Omitting this afternoon all questions regarding the pathology of prostatitis, I wish to call your attention to the clinical side of the subject based upon a review of the last two hundred cases taken from my case book. I shall in no way attempt to tabulate statistics. Many of these cases have been seen in consultation, the treatment being left to the physician kind enough to consult me. Others have discharged themselves usually when so nearly recovered that the need of further treatment was not appreciated, so that statistics as to duration of the disease and time necessary for a cure would be worthless or impossible. In this series of cases it may be fairly stated that about five per cent had no venereal history and research revealed as probable cause masturbation, in several cases; congestion and inflammation due to exposure or working in damp cellars, sewers, hauling seines, etc., in others, while that group of conditions, including sedentary life, overfeeding with little exercise, which is productive of oxaluria, seemed to be the logical factor in a certain proportion of cases.

Two or three years ago I was very much interested in a report of several cases of prostatitis treated by Dr. Max Ballin by approaching the prostate through a transverse perineal incision, opening into and curetting the prostatic lobes and packing the cavities with gauze. The very fact that this procedure has been adopted affirms the presence of positive pain or distress in this

class of cases demanding relief. Having in mind, whenever possible, to add to the doctor's statistics, for the operation seemed to me an excellent one in cases such as he reports, I have examined my cases with a good deal of care and have not in this series found a single one whom I could conscientiously send to the operating table. When my syllabus went to the secretary I had not reviewed these cases, and after doing so am quite uncertain as to the extreme nervous phenomena, seen in only one or two cases being due to the prostatitis or only coincident with it.

Frequently after having made a diagnosis of chronic prostatitis, upon asking the physician regarding the previous subjective symptoms, I have learned that because of no special urinary symptoms or perineal distress, no attention had been given to the prostate gland. In my experience with chronic prostatitis, severe nervous phenomena or great distress has been rarely noted. With the swelling and fever of acute prostatitis the constitutional and local symptoms are well known to this audience and need not enter into this discussion.

Because there are no symptoms from which the patient may make his own diagnosis, it does not follow that there are not conditions present leading the physician to suspect prostatitis.

A patient with a history of gonorrhea or sexual excesses, complaining of precipitate ejaculations, of less seminal fluid than had formerly been discharged and other symptoms attributed to loss of manhood is very apt to be suffering from chronic prostatitis. With or with-

\*Read at the Manistee meeting of the Michigan State Medical Society, June, 1908.



out these symptoms usually in connection with but over-shadowing them, nervousness, dyspepsia, loss of flesh, etc., found in conjunction with prostatitis and improving as the prostatic condition improves, may fairly be considered symptoms of prostatitis.

Many men have, following a first attack of gonorrhea, frequent remissions, the same yellow discharge containing gonococci, but without the usual period of incubation or urethral discomfort. These patients have frequently been discharged as cured by their physicians. They may have been cured and this attack really be a new infection, but the chances are nine out of ten that a prostatitis has been overlooked and in competent hands such a patient would not have been allowed his freedom, although I fully appreciate that the doctor is by no means always to blame.

One often hears of and sees the so-called morning drop. I have histories of many patients who have called on me because of this morning drop. They have gone the rounds and have used one injection after another. Some of them may have had no yellow discharge for many months; they have cohabited often with various women; they have never infected their wives—and this by no means always because the women are immune because of previous infection with this particular individual germ. Where such a morning drop is present it is our duty to know from whence it comes and what it means. It may be the result of congestion or inflammation back of a stricture. It may be from chronically inflamed Morgagnian crypts or glands of Littré. It may be from localized patches of inflammation along the pendulous urethra. The two-glass test may show a perfectly clear second portion, three glass test may not show a clear second portion and a few plugs in the third, but on these accounts let no physician fool himself, for a great

majority of these cases will be found to have a chronic prostatitis.

The diagnosis is not always so easy as one might suppose. A man in middle life or less may have strictures readily discovered. The urethroscope may show Morgagnian crypt infection and still the morning drop be unaffected by systematic sounding or applications of any kind to the pendulous urethra. I find that many a fee has been paid by patients who have not been treated for the conditions which caused their trouble.

It seems to be easy to diagnosis diseases of the anterior urethra and difficult for many to appreciate abnormal conditions in the prostate and seminal vesicles. Speaking of the vesicles, I have come to believe that whenever seminal vesiculitis is present there is also prostatitis, although the converse is not true.

As to diagnosis: Having stated that by far the majority of cases of prostatitis, but more particularly chronic prostatitis, are subjectively symptomless one must conclude that the objective findings must be studied for a diagnosis. It is not necessary at this time to more than state the fact that prostatitis may be present in conjunction with disease of the neighboring organs, from which it must be differentiated. Instrumental examinations are rather for the purpose of excluding diseases of the urethra or bladder than for any aid they may give regarding the prostate gland itself.

The examining finger in the rectum and microscopical examination of prostatic fluid are the only reliable means of determining a diagnosis.

With reference to the examination with the finger one feels the prostate under a variety of conditions. There is the small, hard prostate which seems to show, if not an increase in the fibrous tissue, at least a lessening of the glandular structure. I have found in a number of cases where the comparatively young man has been addicted to the habit of excessive

masturbation, he consults the surgeon on account of sexual weakness, is nervous, pale, has frequent emissions of small quantity. A small amount of fluid can be expressed into the urethra by massage, and this will contain only a moderate number of pus cells.

A note in a large number of my cases says one or both lobes soft in the center with a well-marked firmness of the periphery of the gland. There are also quite a number of cases in which the entire gland is soft and I find the suggestion noted that this case seems to me like a wall of a sack where the entire glandular substance had been destroyed by abscess formation; and still others with small, softened areas, perhaps also a few hard, pea-like lumps in the same case.

The prostate of normal consistence and size is not at all uncommon, but one cannot in an individual case say that his prostate is not swollen. Prostate lobes differ just as testes differ in size and often from the simple palpation one finds it impossible to diagnose prostatitis, although the great majority are felt to have some of the above mentioned abnormal conditions.

Finally, the supreme diagnostic test must be the microscopical examination of the prostatic fluid. Taking care not to reach the vesicles, after the urethra has been cleared, the prostate is gently massaged. When the fluid comes to the meatus, as it does in most cases, if one finds in it prostatic epithelium and pus cells, he may safely make a diagnosis of prostatitis. When there is not sufficient fluid to be expressed, the first urine passed in a test tube will carry with it the products expressed and the centrifuged specimen may be examined. Prostatic fluid is a composite of somewhat complicated character and contains a few leucocytes, but it requires more than a few leucocytes to prove the presence of prostatitis, and I think no one would

hesitate after studying these two hundred and more specimens to declare them all inflammatory.

To properly discuss the question of prognosis would take in itself more time than is allowed to me, but I wish to say that the prognosis is good as a rule, providing the proper treatment is instituted and the cause can be removed. I do not believe that there are many cases of gonorrhea, and nearly all chronic gonorrheas are cases of chronic prostatitis, which can not be so cured that the patient can with perfect safety marry. Such patients I have seen carry the gonococcus for years, then it has disappeared, the patient has married and been perfectly happy with a healthy family around him.

The symptoms of neurasthenia, due to prostatitis, have entirely disappeared in many instances. The abnormal feel of the prostate recovers its normal character—but not in all cases.

It is scarcely possible to promise a quick cure. More often than not it has taken several months to allay the symptoms for which the patient consulted me, and even more to satisfy myself of a perfect cure. It has been rare that a case has relapsed after careful treatment.

In a few instances the patient has been treated for a year or two and even then evidence of chronic prostatitis has remained, but without the gonococcus. These long drawn out affairs have so impressed themselves upon me that by going over my notes I have been surprised to find how few there are, and my faith in the curability of prostatitis has been greatly strengthened in this attempt to place before you the results of my experience.

Finally a word regarding treatment: In acute cases the object is to prevent abscess formation and promote resolution, and these objects are obtained by employing heat or cold by means of the



rectal psychrophore, stopping all local treatment of the urethra, keeping the bowels open, the urine bland and insisting on rest in bed.

Chronic prostatitis, I believe, is best treated by massage, irrigation and the psychrophore. Theoretically, it seems quite possible to bring about good results by phoresis, but I have had little experience with it. As stated earlier in the paper, I have seen no case where the patient had severe suffering due to an uncomplicated prostatitis. The many cases seen where as a result of inflammation the gland had been destroyed left

only a few pus cells in the urine with a small, flabby sack, the prostatic capsule. These patients have not suffered and I have not felt that draining and packing such a sack would add much to the patient's comfort.

The points that I would wish to emphasize are: First, the frequency of prostatitis; Second, That chronic urethritis is usually prostatitis; Third, the necessity of persistent, frequent and painstaking treatment; and, Finally, pessimism must give way to a more optimistic prognosis.

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## LYMPHATIC LEUKEMIA, WITH REPORT OF THREE CASES

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Leukemia is defined as an "affection of the hematogenous organs, characterized by persistent increase in the white blood corpuscles, associated, either alone or together, with changes in the spleen, lymphatic glands and bone marrow." This definition is not exactly accurate, for cases of leukemia have been reported with an actual leukopenia. Also the disease affects the red cells as well as the white.

Various attempts have been made to classify the different forms of leukemia, but all authorities agree in dividing the disease into two general forms, the spleno-medullary and the lymphatic. Each of these general types has been subdivided in different ways by different authors. The lymphatic form is ordinarily considered the rarer of the two. Osler saw thirty-seven cases of leukemia in his clinics in fifteen years, of which five

were acute and eight chronic lymphatic leukemia. The hospitals of Barcelona report one case of leukemia in 59,940 patients; in Heidelberg they report one in 1,137, and in Stockholm one in 1,087, but they do not state whether these were the spleno-medullary or the lymphatic type.

Males are more commonly affected by leukemia than females, the middle-aged more than those of either extreme, below fifteen or over forty-five. The disease is not considered hereditary, but there is on record a report from Cameron of Montreal of a leukemic mother who lost two children of leukemia, and her mother, grandmother and brother suffered with symptoms strongly suggestive of the disease. Leukemia has been found in the horse, dog, ox, cat, hog, mouse and recently Warthin has reported it, for the first time in birds, in the common fowl. The etiology is unknown, but malaria and syphilis have been mentioned as probable causative factors. The etiolog-

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ical theories will be discussed later.

Lymphatic leukemia, for our purposes in this paper, may be divided into acute and chronic. The acute form begins insidiously, the patient complaining of weakness, and of tiring very easily. This condition obtains for a week or two, up to three or four months, when the symptoms change, and "may suggest many other diseases, as acute tonsillitis, diphtheria, scurvy, typhoid fever, malaria, tuberculosis, ulcerative endocarditis, purpura hemorrhagica, septicemia, pyemia, pernicious anemia, and osteomyelitis" (Emerson). Guinon and Joly classify the symptoms of acute leukemia under three heads: First, those with profound anemia, with glandular enlargement, and hemorrhagic tendencies in the later stages; second, those with hemorrhagic tendencies from the first, resembling ineffective purpura; and third, those pseudo-scorbutic cases, where lesions in the buccal cavity are the chief feature.

The first symptoms of chronic lymphatic leukemia are usually bleeding from the nose and throat, followed soon by gastro-intestinal disturbances. The bleeding lasts for a time and then ceases. The cervical, axillary, inguinal, and mesenteric glands become enlarged, soft, distinct and movable. They vary in size at different times, becoming smaller and harder as the disease progresses. The spleen is sometimes slightly enlarged, and may be greatly so. The liver is usually enlarged, due to diffuse leukemic infiltration. Chronic lymphatic leukemia may be divided, by the blood findings, into the small lymphocytic and the atypical celled, or mixed celled varieties, as represented by cases I and II.

Acute lymphatic leukemia must be differentiated from the diseases enumerated above, while chronic lymphatic leukemia must be differentiated from Hodgkin's disease and syphilitic adenitis. This differentiation can only be made positive, and hence the diagnosis of lymphatic

leukemia, acute or chronic, can only be made positive by careful and repeated blood findings. I firmly believe that when these blood examinations are more generally made the disease will be found to be more frequent than is now supposed.

The blood examination shows a wide variation in both the white and red blood cells, but in general the red cells are reduced in number, have polychromatophilic cells in quite an abundance, and also cells in which the hemoglobin forms a mere ring. There are usually poikilocytes present in greater or less degree, normoblasts are usually rare, and the hemoglobin index high. The white cells are increased in number, except in a few isolated cases, and have a large excess of either the large or small lymphocytes, or both, with a corresponding decrease of the polymorphonuclears. The preponderance of large lymphocytes was formerly supposed to represent the acute type of the disease, and the excess of the small lymphocytes the chronic form, but recently this has been shown not to hold true. Forbes and Langmead report ten cases of acute lymphatic leukemia in which the large lymphocytes were in the majority in three cases, the small in four cases and both the large and the small in about equal proportions in three cases. Eosinophiles and mast cells are usually reduced in number; however, there is on record one case of mast cell leukemia in which the mast cells exceeded 30%. In case I of this series the mast cells reached 4.5% at one time and 8.72% at another.

#### Report of Cases.

Case I. Chronic lymphatic leukemia. Mr. Nelson LaP. is sixty-one years of age, of French descent, and was one of a family of six boys and three girls. His father died suddenly and in his sleep at the age of seventy, of unknown cause. His mother died insane at the age of sixty-eight. One sister died of typhoid fever and one of cancer of the stomach. One brother was killed on

the railroad. The rest of the family have always been healthy, as has the patient up until the present illness. For twenty years or more he has had a fatty tumor on the back of his neck. He denies ever having any venereal trouble, but admits exposure in past years.

Early in the spring of 1907 he came to my father, Dr. W. H. Haughey, who has been his family physician for twenty years, complaining of "nose-bleed." All the ordinary remedies were tried without avail, when he was referred to Dr. R. D. Sleight, a nose and throat specialist, whose report follows:

"I examined Mr. LaP. on July 29, 1907, and found that he had a large ulceration of the left tonsil, and the tonsil was very much enlarged. Also the right tonsil was somewhat enlarged. The ulceration was very angry looking. I enquired into the history, and from the character of the ulcer I diagnosed it a specific ulceration. He had had considerable hemorrhage from the ulcer. I painted the ulceration with silver nitrate, and gave him saturated solution of potassium iodid—giving him about twenty grains three times daily. Also gave him a gargle of tannic acid and glycerine. I continued this treatment for about three weeks, when the ulceration healed and the induration of the tonsil subsided."

Mr. LaP. tells us that he took a few doses of Dr. Sleight's medicine, and then could keep no more down, and so put it on the shelf and said nothing. At this time the glands in the neck, axilla, groins, and mesentery became enlarged, and the patient lays this to the iodid of potassium.

The patient also complained of being easily fatigued. He would come home from his work, which was that of running a drill press, and would go to sleep while at supper. He has been troubled considerably with indigestion, nausea, and vomiting, and has had great pain in the region of the stomach.

Dr. W. H. Haughey accepted the diagnosis of syphilis, and placed the patient on inunctions of mercury, with small doses of the iodides, every dose of which he rejected. About this time I also saw the patient, and concurred in the diagnosis of syphilis. This was in August, 1907. Things ran along this way for several months, the patient working part of the time, rejecting the iodides in whatever form administered, but receiving the mercurial inunctions regularly.

In February, 1908, he was still unimproved, and had to quit his work. On February 20, I

made a blood and differential leucocyte count with the following results:

Red cells .....	3,610,000
Leucocytes .....	65,500
Ratio whites to reds.....	1/55
Hemoglobin .....	90%
Hemoglobin Index .....	1.15

Differential leucocyte count:

Differential leucocyte count :	Normal (for comparison.
Polymorphonuclears .....	21.5% 70-72%
Small lymphocytes .....	50.5% 22-25%
Large lymphocytes .....	21.5% 3- 6%
Transitional forms .....	1.0% 1- 2%
Eosinophiles .....	4.5% 2- 4%
Mast cells .....	4.5% 0.5%
Total lymphocytes .....	73.0% 25-28%
Many necrotic cells present.	

The patient was presented before the Battle Creek Medical Club at one of its Post Graduate meetings, with the diagnosis of chronic lymphatic leukemia. The blood has been studied also by Dr. A. W. Nelson, Bacteriologist at the Battle Creek Sanitarium, who took samples of it for use in the class work of the American Medical Missionary College.

When the diagnosis of lymphatic leukemia was made, we abandoned our diagnosis of syphilis, stopped the inunctions, and placed the patient on Fowler's solution in one drop doses, to be increased rapidly up to toleration. When the pain in the stomach has bothered him too severely, we have reduced the amount of arsenic, usually with good results. He has taken Fowler's solution nicely, with a reduction in the number of leucocytes to about fifteen thousand per cubic mm., and he seemed to feel better for a time, but the blood examinations have shown a steady progression of the disease rather than a recession, as can be seen by a reference to the table.

On March 10th we found a marked increase in the red cells, 6,864,000, with a diminution of the whites to 38,000. Two days later the reds were 5,352,000, and the whites 30,400. This was immediately after the high water mark in our flood of last spring, when the water was six inches above the floor in his house, and he had to move his family and household goods up-stairs. He was very indignant at the railroad companies because he thought that their embankments had helped to increase the flood. This served to



modify the count as above. In another week the reds had fallen to 4,744,000 and the whites to 18,666.

All this time the percentage of lymphocytes had consistently increased. During the time of the flood and its subsidence, the percentage of total

As we expected, the polymorphonuclears were increased and small lymphocytes were decreased at the next count.

Since May the lymphatic glands all over the body have been getting smaller and a little harder. The spleen has been somewhat enlarged and

Case I

	Red cells	Whites.	Ratio.	Hb.	xpnd Hb.	Polymorpho- nuclears, %.	Small lym- phocytes, %.	Large lym- phocytes, %	Transi- tional, %.	Myelo- cytes, %.	Total lym- phocytes, %.	Eosino- philes, %.	Mast cells, %.	Neurotic, %.
Feb. 20	3,610,000	65,500	1 to 55	90%	1.15	21.50	50.50	21.50	1.00	0.00	73.00	1.00	4.50	pres.
Feb. 24	.....	.....	.....	.....	.....	16.00	62.10	11.70	3.20	0.00	77.00	1.30	1.60	4.10
Mar. 4	4,068,000	68,000	1 to 58	90%	1.12	12.80	64.00	13.60	4.50	0.00	82.10	0.00	0.00	5.10
Mar. 10	6,864,000	38,000	1 to 181	90%	0.65	3.20	74.70	13.50	2.20	0.00	90.40	1.90	0.50	4.00
Mar. 12	5,352,000	30,400	1 to 176	90%	0.84	5.80	77.60	12.00	0.90	0.00	90.50	0.70	0.70	2.30
Mar. 17	4,744,000	18,666	1 to 255	90%	0.95	4.80	74.20	14.50	1.30	0.00	90.40	1.30	0.30	3.60
Mar. 25	5,176,000	17,328	1 to 299	90%	0.87	13.20	77.10	6.70	0.60	0.25	84.40	0.25	0.05	1.85
Apr. 2	4,664,000	19,000	1 to 245	90%	0.96	11.90	79.80	5.50	1.10	0.20	86.40	0.20	0.20	1.10
Apr. 10	4,448,000	16,800	1 to 264	90%	1.01	8.14	80.34	8.43	0.84	0.28	89.61	0.28	0.28	1.41
Apr. 19	3,392,000	13,777	1 to 247	90%	1.29	7.85	66.58	14.53	0.58	0.00	81.69	0.58	8.72	1.16
May 11	4,024,000	12,800	1 to 302	80%	0.99	15.66	70.05	7.99	1.37	0.00	79.41	1.64	0.00	3.29
May 20	4,216,000	19,133	1 to 215	80%	0.94	8.98	79.97	7.48	0.89	0.00	87.34	0.29	0.60	1.79
May 26	5,408,000	18,200	1 to 292	90%	0.83	15.61	78.04	4.45	0.32	0.00	82.81	0.95	0.00	0.63
June 4	3,808,000	20,280	1 to 188	90%	1.18	6.87	77.13	11.06	0.38	0.00	88.57	1.52	1.14	1.90
June 12	3,976,000	15,571	1 to 256	90%	1.13	14.02	79.37	3.17	0.26	0.00	82.80	0.53	0.00	2.65
June 20	4,274,400	11,920	1 to 358	80%	0.93	11.85	79.39	5.92	0.47	0.00	85.78	0.71	0.24	1.42
June 30	4,400,000	15,040	1 to 295	90%	1.02	11.25	77.95	6.84	1.10	0.00	85.89	0.88	0.44	1.54
July 10	3,005,600	18,240	1 to 164	90%	1.49	7.97	72.73	9.56	0.39	0.39	82.68	2.39	1.54	4.98
July 22	3,560,000	16,960	1 to 209	90%	1.26	10.91	76.57	7.27	2.05	0.00	85.89	1.36	0.25	1.59
Aug. 11	3,561,000	34,400	1 to 104	90%	1.25	14.10	76.94	4.61	0.77	0.00	82.34	0.51	0.00	3.07

Case II

July 6	4,032,000	8,840	1 to 456	90%	1.11	39.72	38.56	12.41	2.48	0.00	53.45	1.24	0.00	5.59
July 9	.....	.....	.....	90%	.....	45.17	29.05	16.79	1.93	0.00	47.77	2.54	0.00	4.52
July 17	4,140,000	8,200	1 to 505	90%	1.09	49.00	28.00	21.00	0.00	0.00	49.00	2.00	0.00	pres.
July 23	3,912,000	15,200	1 to 257	90%	1.12	49.50	35.83	8.50	2.13	0.00	46.46	1.21	0.00	1.83
Aug. 1	3,220,800	6,355	1 to 506	90%	1.09	49.25	26.71	18.70	2.29	0.00	47.70	0.38	0.00	2.67
Aug. 10	4,024,000	8,320	1 to 483	90%	1.12	40.29	40.87	14.49	2.03	0.00	57.39	0.86	0.29	1.18
Aug. 17	3,171,400	336,000	1 to 9	90%	1.42	53.11	28.25	13.39	0.95	0.00	42.59	0.95	0.00	3.35

Case III

July 28	1,976,000	60,664	1 to 31	50%	1.20	2.73	15.91	76.82	0.91	0.00	93.64	0.00	0.00	3.63
July 30	1,236,400	61,600	1 to 20	30%	1.09	0.56	12.43	77.98	0.00	0.00	90.41	0.56	0.00	8.47
Aug. 2	904,000	17,820	1 to 53	30%	1.50	0.39	43.41	54.65	0.39	0.00	98.45	0.00	0.00	1.16

lymphocytes was higher than at any time before or since, being about 90%. The polymorphonuclears were the lowest at this time that they have been, being 3.2%, 5.8% and 4.8% at different counts. The last of April he visited his brother in Port Huron, and had a cold when he returned.

the liver markedly so. He has at times suffered from difficult breathing, probably due to the pressure of the glands in the neck, which have been enormously enlarged.

During this series of blood examinations, I have found occasional mormoblasts, poikilocytes have



been present all the time, as well as polychromatophilia in varied degrees. A large number of shadow corpuscles and blood plates have also been present. There have been many cases in which the red cells seemed to have a hollow in one edge from which blood plates were streaming. Necrotic leucocytes are always present, and several leucocytes have been found in various stages of mitosis.

The urine in this case has been negative. The diazo reaction has been present at every examination, and sugar was found once in 0.2%. Other elements have been normal.

The patient is cachectic, but notwithstanding considerable indigestion and pain in the stomach, has lost only fifteen pounds in weight, from 165 to 150.

With the exception of the first few examinations of this patient's blood, I have been finding, regularly, short streptococci in the counting chamber, there being two to six cocci in each chain. These germs are motile and are probably of the salivarius group, gaining entrance to the blood stream through the lesions in the mouth. At first I paid no attention to these germs, supposing that I had contaminated my specimen, but later I found reference to these germs, and since then have noticed them particularly. I will have a few words to say about them under the head of etiology.

Case II. Chronic lymphatic leukemia of the atypical and mixed celled variety. Geo. S., aged 34. This patient's past history is negative, with the exception of two severe attacks of gonorrhea a number of years ago, and several years apart. With the first attack he had "soft chancres," but denies all secondaries. He has been twice married, and has one healthy child by his second wife, a girl about fourteen months old.

About a year and a half ago he began to feel tired, and could not get rested. He had frequent attacks of diarrhea and vomiting, and frequent nosebleed. These were unusual for him, and he consulted a "doctor," (a notorious quack). The nose bleed stopped bothering him after a few months. About six months ago he came to us for advice, with the diagnosis of tuberculosis of the bowel. We could find no evidence of tuberculosis other than his emaciation. He says he has lost twenty pounds in the last year and a half. The lungs and heart were normal, but he complained of great weakness. We advised him to spend most of his time out of doors—to secure out-of-door employment if possible.

July 6th he returned to us, when a blood count was made: Red cells, 4,032,000; white cells, 8,840; hemoglobin, 90%; the differential leucocyte count showed polymorphonuclears, including some very large, almost giant cells, and some with abnormally divided nuclei, 39.72%; small lymphocytes, 38.56%; large lymphocytes, 12.41%; transitional forms, 2.48%; eosinophiles, 1.24%, and necrotic cells, 5.59%. Many of the polymorphonuclears had six or seven lobes to the nucleus, and in others the lobes appeared swollen, still others were very small, hardly over 10 microns in diameter. The red cells were largely deficient in hemoglobin, with the exception of a considerable number of polychromatophilic ones. Normoblasts were rarely present. A few mitotic large lymphocytes, and on July 17th one eosinophile myelocyte were found. The urine was negative, the diazo reaction absent, and the tuberculin test negative.

His spleen was easily palpable, and the liver was slightly enlarged. The glands in the axillæ and groins, and a few in the neck were enlarged.

He complains that he is always tired, can hardly climb up-stairs, sleeps much of the time, and awakens as tired as when he went to sleep. He says he often has attacks of nausea and vomiting, and diarrhea coming on soon after a meal. When he goes to stool, his mouth waters, secreting nearly if not quite an ounce of saliva, then he has an uncontrollable desire to urinate, after which his bowels move, and he feels better until the next attack. He seems to dread these times at stool, because of the "drooling" as he calls it. He is a man of low mentality, and a highly nervous temperament. He may have self induced the above described condition.

From the abnormal polymorphonuclears present, together with the increase in the large and small lymphocytes, and from the physical and subjective findings, we believe this to be a case of mixed and atypical celled leukemia of the chronic lymphatic variety, probably just merging past the stage described by Emerson as sublymphemic pseudoleukemia.

Case III. Acute lymphatic leukemia. Helen S. Aged two years. The child's mother had noticed that for about two months, since the first of May, she had been losing in vitality, but was not ill. July 22, the child was taken sick, and Dr. W. H. Haughey called. He found the temperature 101°, pulse accelerated and weak, abdomen distended, and right cheek swollen. He

suspected autointoxication and treated her accordingly. The condition of the mouth soon attracted attention. The gums were red and inflamed and the teeth loose. The tonsils were not particularly noticeable, but upon examining the throat a membranous mass was coughed up on the tongue depressor. This mass was taken to the laboratory and examined for Klebs-Loeffler bacillus. The bacteriologist reported an extensive growth on the culture medium of short streptococci, only a few to a chain, but smears from the original mass gave several long chains.

The condition of the mouth kept getting worse, and took on a scorbutic tendency. There were glands distinctly palpable in the groins, one or two in the cervical region, but none in the axillæ. The spleen and liver were not palpable. Purpuric spots were just making their appearance on the trunk and legs. A blood count was made (see Table). This count showed a typical picture of acute lymphatic leukemia—red cells, 1,876,000; whites, 60,664; hemoglobin, 50%; large lymphocytes, 76.82%; small lymphocytes, 15.91%, and polymorphonuclears, 2.73%. The division into large and small lymphocytes in this case was particularly difficult because there was such a gradual gradation in size from the very small, 5 microns up to those of 15 microns and over, some being as large as 30 microns in diameter. I have tried in this case as well as in cases I and II to class all those lymphocytes under 10 microns in diameter as small lymphocytes, and those over 10 microns as large.

There were many poikilocytes present, as well as various sizes of red cells; a large number of polychromatophilic red cells, and an equally large number with only rings of hemoglobin. There were a few normoblasts, two megaloblasts with mitotic nuclei, and six large lymphocytes undergoing karyokinesis. Hydrops of nucleus was present in a few cases and some of the lymphocytes were vacuolated. On the day of death I found five large lymphocytes in the process of amitotic cell division. Blood plates were fairly numerous, and a few red cells appeared to have an opening in one edge, from which blood plates were streaming. It was noticeable that the number of red cells progressed steadily downward, and that the number of white cells dropped just before death. This corresponds to the findings of Emerson, McCrea, Forbes and Langmead, and others.

In my examination of this blood, in making the red and white cell counts, I found quite a few

short streptococci, only a few germs to a chain. These were freely movable, and were present at each count.

The urine chemically was negative, but microscopically there were many cylindroids, no casts, bacilli (colon?), several triple phosphate crystals, some squamous and columnar epithelial cells, a few leucocytes and red blood cells.

The case history from day to day was as follows:

June 22. Temperature 101°, pulse accelerated, respiration dry, right cheek swollen, abdomen distended, full and gaseous, constipated, child quite restless.

July 23. Temperature 101.6°. Good result from castor oil.

July 24. Temperature 104°. Gave calomel,—swelling in the cheek lessened.

July 25. Temperature 103°. Good results from the calomel.

July 26. Temperature 102.5°. Distention much less.

July 27. Temperature 103°. No improvement,—breath foul.

July 28. Temperature, morning 102.5°, evening 104°. There was an ulcer between the right cheek and the upper jaw. Culture examined for Klebs-Loeffler bacillus, but only short streptococci found. Purpuric spots on the body and legs, glands in the groins and cervical region. Blood count in the evening, as above. Diagnosis of acute lymphatic leukemia.

July 29. Temperature, A. M. 103°, P. M. 103.5°. Child very peevish and fretful. Ulcer on the gum dressed with hydrogen peroxide. Fowler's solution internally. Purpuric spots on the knee. Breath offensive.

July 30. Temperature A. M. 102.5°, P. M. 102.7°, pulse 120, respiration 28. Child rested better. More purpuric spots on elbow. Second blood count.

July 31. Temperature A. M. 101°, P. M. 100°, respiration 26, pulse 120. Considerable hemorrhage from the mouth during the day. Had a restless night.

Aug. 1. Temperature A. M. 101°, P. M. 104°, respiration 23, pulse 140. Removed a large slough from the gums. More purpuric spots, and hemorrhagic oozing from the mouth. Child got up and went into the kitchen where nurse was preparing some food for her, and fell in a heap on the floor.



Aug. 2. Temperature A. M. 103°, respiration 72, pulse 169. Blood count made at 11 A. M. Child very restless and died at 4:30 P. M.

The child lay in its bed during the last few days and would not raise hand or foot,—it seemed completely prostrated, and was almost transparent. No autopsy was obtained.

The neighbors say the playyard of this child was a small area fenced off in the back yard, in which were barn yard, chicken coop, and garbage can.

### Etiology.

The causative factor in lymphatic leukemia is unknown, but has been the subject of much speculation. It was early thought to be a tumor formation in the glands and spleen. It was supposed that the lymphatic cells from these enlarged glands found their way into the blood to produce the typical blood picture. Of recent years this idea of the cause of lymphatic leukemia has been modified along two lines. Many investigators, among them McCrea, Neumann, Treadgold, Emerson, believe the disease to be a malignant growth in the bone marrow, with metastases in the glands, spleen, liver, kidneys, etc. They claim that the growth in the bone-marrow is hemmed in on all sides by hard, bony tissue, and so is necessarily limited in expansion, and after a time the new formed cells work their way through the endothelial lining of the blood and lymph vessels, thus finding their way into these streams. Thus they account for conditions which clinically and pathologically resemble lymphatic leukemia, but do not have the typical blood picture. They say this blood picture will come later. As supporting this view, Warthin, Dock and Treadgold have reported several cases of chloroma with leukemia. Treadgold in his recent report of four cases says he believes lymphatic leukemia to be due to a diseased condition of the bone marrow, but that the glands and spleen very often cannot be excluded as the seat of primary disease.

This statement of Treadgold's leads to another outgrowth of the original theory. Many believe the condition to be due to disease of any of the blood forming organs, whether bone marrow, lymph glands, or spleen. Forbes and Langmead in a lengthy paper read before the Royal Society of Medicine of London, April 10, 1908, sum up the various theories and give their support to the malignant growth theory, but believe that this growth may be in any of the adenoid tissues. Personally I accept this theory, believing that the disease is due to a malignant change in the blood-forming cell of these blood-forming organs. I believe the progenitors of the red as well as the white cells are affected. I cannot localize the condition in one set of organs to the exclusion of another, for as yet I have had no opportunity of studying this disease post-mortem. My reason for adhering to the malignancy theory is the appearance at times, if not constantly, of mitotic figures in the blood cells, both red and white. I found a few mitotic figures in the large lymphocytes of each of these cases,—rarely in cases I and II, but more frequently in case III, in which case I also found some amitotic figures among the large lymphocytes, and several mitotic megalocytes. In case I there were a few red cells with mitotic nuclei.

Frederick Taylor, in the "Transactions of the Clinical Society of London, 1904," advances the idea that lymphatic leukemia has its primary seat in the thymus gland, which he found enlarged in several cases. This view is not adopted by others so far as I know.

Another theory has been receiving considerable attention; the microbic theory. The supporters of this theory point to the many features that resemble infectious diseases; as, the hemorrhages that resemble those of infectious fevers. In the acute forms of the disease there is a septic temperature curve.

Löwit a few years ago described an hemamoebum as the cause of leukemia, the one causing lymphatic leukemia being a small intranuclear organism taking a peculiar stain. He published a lot of work on this subject, and presented numerous drawings. Fürst, Dock, and others reviewed Löwit's work and concluded that the forms he described were caused by artefacts due to his peculiar method of staining. This work has so few supporters that it is almost impossible to find a reference to it in the current English literature.

Pincus, Holst and others have recently advanced the idea that a short streptococcus may be the cause of this disease. They report cases showing the presence of these germs, and refer to one case reported by Obrastzow, of a nurse who nursed a fatal case and then contracted the disease. Emerson questions whether "all our cases of acute lymphatic leukemia may not some day be shown to be due to infection." Forbes and Langmead report four cases in which they have found the short streptococcus. But in their cases the germs were found in three instances post-mortem, and in one just an hour before death. As mentioned in my case reports, I have found short streptococci in all three cases. I do not believe, however, that they have a causative relation to the disease in these cases, else cases I and II would have had a more or less septic fever, which they have entirely escaped. I believe these germs are of a benign salivarious group, gaining entrance through the damaged mucosa of the mouth, and while they are interesting as lending a possible support to the infection theory, I doubt their causative relation and consider them more in the light of a secondary infection.

Schupfer injected the blood from a case of acute lymphatic leukemia into several cancer cases, and since he secured no reaction, drew the conclusion that leu-

kemia is not due to an infection with a streptococcus.

The prognosis of lymphatic leukemia is bad. J. F. Dickson in London *Lancet* for August 19, 1906, reports one case of "subacute lymphatic leukemia" in a man of twenty-four years as "completely cured in two months' time under the administration of liquor arsenicalis, five to fifteen drops; Grawitz in *Berliner klinische Wochenschrift*, June 15, 1908, reports one case as cured for two years by the use of Roentgen-ray; but of fifteen cases treated the others are either dead of recurrence or unimproved. Mosse in the same journal, for June 29, 1908, reports one case of lymphatic leukemia in which the blood returned to a histological condition under Roentgen treatment, but the patient died about a year and a half later of cirrhosis of the liver, probably caused by the treatment. He claims this is "the first case to give histological findings in the blood."

These are the only cases I have been able to find in the recent literature reported as cured, but I have found any number of authors who say the disease is invariably fatal. The acute form may prove fatal in four days, or may extend to three or four months. Emerson reports three cases of respectively eight, three and five weeks' duration. Forbes and Langmead report twelve cases ranging from one week to seven months, but averaging seven weeks. Our case III ran twelve days.

The chronic form of the disease may run anywhere from a few months to three years. Osler reports one case in which the leukemia lasted between eleven and twelve years, but says the longest of his clinical cases was three years. Dr. Nelson of the Battle Creek Sanitarium tells me of a case they have had under observation seven years.

In our present knowledge of the disease the treatment of lymphatic leukemia resolves itself into an expectant treat-



ment, meeting conditions as they arrive, and a treatment directed against the disease process. Many remedies have been tried, but only two have met with any measure of success,—arsenic and the Roentgen ray. The treatment of leukemia theoretically should be directed to a destruction of the diseased and abnormal cells found in the blood, and to the inhibition of their production. It has been found that both arsenic and the Roentgen ray have this selective action to a degree; that is, they tend to destroy the lymphocytes and other abnormal cells circulating in the blood, and they also delay the formation of these cells.

Warthin, in *International Clinics*, Vol. IV, 1907, discusses the treatment of leukemia by arsenic and the Roentgen ray, and points out the effects and advantages of each. He also points out the dangers from each, which are great. Neither remedy will uniformly have the desired effect, especially in lymphatic leukemia.

From arsenic there is always the danger of arsenical poisoning, and from the ray there is danger of intense intoxication, of which the patient dies in a day or two. Warthin favors the alternate use of these two remedies, but states that the benefits are variable and not very marked. He says there may occasionally be a return to the normal, or nearly so, in the condition of the blood, but this is only a passing condition.

Maragliano, of Naples, has also studied the use of the Roentgen ray in leukemia, and has reached about the same conclusion, namely, that in lymphatic leukemia the benefits are too evanescent and variable to warrant its use.

Schirmer, of Jena, says the results of Roentgen treatment are variable and not usually good.

The three cases reported in this paper occurred in our practice in the short period of six months.

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**Disinfectants.**—Kedzie, of the Agricultural College, Lansing, says that formaldehyde was first prepared for disinfectant purposes by securing the partial oxidation of wood alcohol by bringing its vapor in contact with warm platinized asbestos. The difficulties encountered which caused this method to be abandoned were: Danger from fire and low per cent yield of formaldehyde vapor, much of the alcohol being vaporized unchanged.

Among simple apparatus to be found on sale at druggists we now have the paraformaldehyde vaporizers which yield formaldehyde vapor and with comparative safety from danger from fire on account of the construction of the vaporizer.

Paraform (paraformaldehyde, the solid) is, however, much more expensive than formalin (formaldehyde, the liquid 40 per cent solution) and the amount which the householder would be

called upon to expend in order to disinfect his premises makes its use appear inadvisable.

Lately there has been suggested and brought into use the method for liberation of formaldehyde vapor from the commercial 40 per cent solution by utilizing the heat evolved when solid potassium permanganate crystals are brought into contact with the solution in an open dish. (A mixture of the two materials in a glass retort exhibited the violence of the reaction.) The principal advantage of this method is the entire absence of danger from fire; the disadvantage of the method is a serious one, as ordinarily carried out only about 40 per cent of the quantity of formaldehyde contained in the formalin solution is converted into vapor and expelled from the liquid by the heat produced by the oxidizing action of the potassium permanganate on the formaldehyde present in the liquid.—*Public Health*.

## SOME OBSERVATIONS ON THE ETIOLOGY AND TREATMENT OF NASAL CATARRH\*

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The etiology and treatment of catarrhal inflammations of the nasal passages are of interest to the general practitioner, first, on account of the great prevalence of these affections, and second, because inflammations and obstructive lesions of the nasal passages often give rise to more serious extranasal diseases. The well known fact that a large majority of the suppurations of the middle ear and mastoid process originate in comparatively simple inflammations of the nasal mucosa should elicit the interest of the general practitioner particularly in the causes and treatment of nasal inflammations. The relation of infectious post-nasal droppings to infections of the alimentary tract is of sufficient importance to receive the careful attention of the internist. The entire metabolism of the body may doubtless be hampered by obstructive lesions in the nose which interfere with the proper intake of oxygen, which is the most essential element in every bodily function. Oxygen is not only necessary for every manifestation of energy in the body, but it performs a very important service in burning up the waste products of metabolism, reducing them to innocuous end-products. As arterio-sclerosis and nearly all chronic diseases are due to improperly oxidized waste products, which incite inflammations and degeneration in the arteries and various organs of the body, may it not be that hampered respiration is an important factor in many chronic dis-

eases? A familiar illustration of hampered metabolism may be seen in the child with adenoid vegetations, and a similar condition is often observed in adults with obstructive lesions in the nasal passages. These important relations between nasal catarrh and general diseases should be recognized by the general practitioner and elicit his interest in catarrhal affections of the nose.

In this paper the author gives some practical deductions from his own experience in dealing with about eight thousand cases during the past eleven years, rather than a survey of the literature bearing on the subject.

The exciting factor in nearly every inflammation of the nasal mucosa is bacterial infection. Even though the immediate extent may be a chemical, thermal or traumatic irritation, it is the product of bacterial growth which causes the reaction in the tissues which we call inflammation. Could bacteria be excluded traumatism and other forms of irritation would usually produce but simple and transient inflammatory reactions.

Reasoning deductively from this fact, it would seem that the most essential factor in the treatment of catarrhal inflammations would be antiseptic applications, and it was this germ theory of catarrh that led to and developed the "spray specialist" of a decade or two ago. The inventiveness and ingenuity of this class of rhinologists, to which the author belonged for some years, were mainly taxed in discovering antiseptics which were effective germicides and at

\*Read at the Second Annual Meeting of the Third Councilor District, Battle Creek, October 6, 1908.

the same time not irritants to the mucous membrane. These medicaments were applied as vapors, nebulæ, sprays, douches, or on cotton applicators. Antiseptics still occupy an important place in the therapy of catarrh, especially the acute forms of inflammation, but in the author's experience sprays alone are of very transient benefit in the great majority of chronic ailments of the nose and throat, and it is the permanent relief of these chronic affections to which this paper is principally devoted.

The nasal mucosa is continually exposed to many forms of bacteria which are capable under favorable circumstances, of exciting and maintaining chronic inflammations. These germs cannot be excluded or exterminated. They are ever present in normal noses and the rhinologist, as well as the dermatologist, is at present paying more attention to the predisposing causes of mucous membrane and skin inflammations than to the exclusion or extermination of the microbe. There is no greater barrier to microbic infection than normal bodily resistance. When a person dies his resistance to infection is also abolished, and the ever present microbe at once enters the pores of his skin and mucous membranes, and in due time affects the dissolution of his tissues. There are many factors which lessen general resistance to infection, as well as local resistance to infection. The very marked advances which have been made during the last decade in the treatment of chronic catarrhal affections of the nose and its accessory cavities are based on a fuller appreciation of the predisposing causes which lower the resistance of the tissues to infection.

The predisposing causes of catarrh are either extranasal or intranasal. Of the extranasal factors, age, sex, occupation, clothing and climatic conditions require attention, but will not be discussed in this brief paper. The principal extranasal cause of catarrh, in fact the most

important of all causes, is auto-intoxication. The accumulation within the blood and tissues of effete products of putrefaction and improperly oxidized end products of metabolism throws extra work on the kidneys, skin and other excretory organs, and the mucous membranes of the nose doubtless vicariously becomes excretory in character as well as secretory.

In the treatment therefore of chronic rhinitis, our first attention should be given to the patient's general condition, and the causes of autointoxication carefully looked into. Overeating, especially of nitrogenous food, improper mastication, and sedentary habits, are the most important factors in chronic blood poisoning. But our attention should be directed not merely to the alimentary tract. Chronic autointoxication may have its origin in submerged, diseased tonsils as well as in the colon. The tonsils are much more commonly a source of auto-intoxication than is generally supposed. When they contain poorly drained, infected crypts, which are not permanently relieved by local applications they should be thoroughly removed.

I have but briefly considered the extranasal, predisposing causes of catarrh. These are no doubt the most important of all factors to be considered in the treatment. But as that part of the treatment is complex and pertains to general medicine, its discussion does not come properly within the scope of this paper, and the remainder of the paper will be devoted to a consideration of the intranasal, predisposing causes, and the intranasal treatment from the rhinologist's point of view.

The nasal chambers are not merely a pair of openings into the naso-pharynx. The mucous membrane lining the nasal passages and covering the turbinal bodies and septum, if spread out, would cover an area of about twenty-two square inches. The nasal passages are



two extensive fissures between the entire septum and the turbinates, between the several adjacent turbinates, and between the side walls of the nose and lateral wall of the turbinates.

In the ideally constructed nose the opposing walls of these extensive fissures are at no point widely separated from each other, and at no point firmly in contact. This gives ample surface for warming, moistening and purifying the inspired current of air, and perfect ventilation and drainage is afforded in the entire respiratory fissure. Into these fissures the accessory cavities of the nose drain principally into the middle meatus, and less into the superior. The outlets of these sinuses are guarded mainly by the middle turbinate, but their openings under normal conditions are unobstructed. Ventilation and free drainage of the entire nasal chambers and accessory cavities are essentials to healthy mucous membranes. Retained secretions and isolated chambers or areas not accessible to the air currents are much more subject to bacterial invasions and consequent catarrhal inflammation. There is probably no medicinal antiseptic so effectual in restricting many forms of infection and catarrhal inflammation as pure air. This is particularly true of the anærobic infections of the accessory cavities which are so productive of the foul breath. While in Dr. Halle's clinic in Berlin, in 1906, I observed that his sole treatment of many of the milder forms of empyema of the accessory sinuses was to effect a sufficient intranasal opening into the diseased sinus and treat it daily with merely an air douche, nothing more, and many of his cases were thus cured without the usual radical obliteration of the sinus.

Any malformation of the nasal structures which either brings into firm contact opposing mucous membrane surfaces, or which widely separates these surfaces at any point, predisposes to in-

flammation. Firm points of contact on the one hand interfere with the free circulation of the parts, tend to produce stasis and edematous swellings and thus predispose to chronic inflammations. Often pressure upon sensitive nerves in the septum causes reflex headaches. These points of contact also may interfere with the free drainage and ventilation of some part of the nasal respiratory fissure, or of an accessory cavity. On the other hand, widely separated areas of opposing mucous membranes have a tendency to crust formation and the tempering of the air current is thus markedly diminished, which is likely to result in dry pharyngitis and laryngitis. By far the most important intranasal causes of catarrh are the above malformations and their correction by rational methods has yielded brilliant results in many forms of chronic rhinitis for which formerly but little was accomplished.

Deformities which interfere with ventilation and drainage may be in the septum or the turbinates. Doubtless the most common deformity met with is a deflected septum, which may be in contact with one or two turbinates on one side and there may be too wide a respiratory fissure on the other side. Much has been written about the etiology of septal deflections, some claiming traumatism as the principal factor, others faulty development. In the author's cases traumatism has been the cause in a few instances where the deflection was mainly anterior affecting mostly the cartilage of the septum. But faulty development appears to be the principal cause. Adenoids in children, if not removed sufficiently early, often cause a high arched palate. This affords a limited space for the development of the septum above it and it consequently pushes to one side, more often the left side.

In septal deflections it is often possible to obtain sufficient breathing space

on the obstructed side by a removal of a part or all of the inferior turbinal body with which it is in contact, but the results of this form of treatment are often disappointing. A sufficient breathing space may be obtained on the obstructed side, but a very important functional tissue has been hopelessly destroyed. The inspired air current is then mainly through the inferior meatus, whereas normally it should be mainly in the middle meatus. The middle meatus remains obstructed and the discharges from the attic of the nose fall into the larger air passages below, where they dry into crusts. It is unfortunate that inferior turbinectomy is so simple an operation that the beginner in rhinology can readily effect its removal. On this account many turbinates are no doubt sacrificed which would be saved were it so simple a matter to straighten the septum.

By the modern submucous window resection of the septum it is possible to effectively and permanently straighten any septum, no matter how badly deformed, and usually preserve all of the covering mucosa. In this way none of the actively functional mucosa is destroyed, no wide openings are made in the air passages, and often an abnormally large passage on the concave side of the septum is advantageously narrowed. The author has performed this operation about 135 times during the past three and one-half years with very gratifying results. In every case the septum was effectively and permanently straightened, and he has had to record no undesirable results except four or five small perforations which gave the patients no unpleasant symptoms.

There is no doubt but that a nasal obstruction due to a septal deflection, would always be better relieved by correcting the septal deformity than by removal of a turbinate, and the only objection to the septal operation is the

difficulty in its performance and the time required for it. However, this operation has been performed by the author in every case under local anesthesia with very little complaint of pain from the patients. Next in importance to septal deflections are enlargements of the middle turbinal body. This body is not so well supplied with erectile tissue as the inferior turbinate, and when it is enlarged it is often due to malformations of its bony skeleton rather than to its soft parts as is the case with the inferior turbinate. These enlargements of the middle turbinate are due either to the bone being bent on itself in such a way as to make it occupy too much space, or the bone may contain a large cell similar in every way to an ethmoidal cell. An obstruction in the middle meatus due to such a deformity can obviously be removed only by a partial removal of the middle turbinate. Obstructions in this part of the nasal passages are especially productive of catarrhal affections of the nose and sinuses. For the turbinate, which is the natural guardian of the sinus outlets, becomes an obstruction to them, interfering with the ventilation and drainage not only of the sinuses but of the upper portions of the nasal passages, which are the normal pathway of the main current of inspired air. A removal of a portion of the middle turbinate also often affords relief from frontal, temporal and occipital headaches of reflex origin. The naso-palatine nerve lies in the membrane covering the septum at about the junction of the vomer and perpendicular plate of the ethmoid and it is here that the crest of most septal deflections is located and also the point where the middle turbinate most often impinges upon the septum. Pressure of the turbinate upon the trunk of this sensitive nerve accounts for the reflex disturbance.

Third in importance of nasal ob-

structions is hypertrophy of the inferior turbinates. In all forms of nasal stenosis this body is apt to be engorged, but this turgescence is more often due to some adjacent structure pressing upon it such as the middle turbinate or the septum, and when this pressure is removed, and normal respiration secured through the middle meatus the inferior turbinate often assumes its normal size without operation upon it. Enlargements of the inferior turbinate are more often due to turgescence or hypertrophy of its soft parts rather than to deformities of its bone. Its enlargement has less pernicious effect upon ventilation and drainage than middle turbinate enlargements. In chronic turgescence, or hypertrophic rhinitis, it often becomes markedly enlarged at its posterior end filling up the posterior naris. Removal of the posterior end in this case often affords marked relief from nasal stenosis and catarrhal droppings into the

throat, but the author seldom cuts away the body proper of the inferior turbinate.

The time allotted to this paper permits of only a very brief statement of the principles by which the author has been guided in the correction of intranasal deformities. It has been his aim to imitate nature by leaving the respiratory fissures as far as possible in normal form, with no firm points of contact between opposing mucous surfaces on the one hand, and no wide openings on the other, thereby securing drainage and ventilation in all parts, unobstructed circulation and avoidance of crust formation in widely separated regions or on projecting spurs. He believes that this principle, carefully studied and applied will lead to an avoidance of the too radical removal of important functional tissue which has in the past brought nasal surgery somewhat into dispute.

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That the Egyptian medical student on leaving school does not think lightly of his future labors and holds in horror criticisms some of our American physicians rather court, is evidenced by the following quotation from the *Lancet* (London): "I swear, in the name of God the Most High, and of His sublime prophet, Mohammed, whose glory may God increase, to be faithful to the laws of honor, honesty, and benevolence in the practice of medicine. I will attend to the poor gratuitously and will never exact too high a fee for my work. Admitted into the privacy of a house, my eyes will not perceive what takes place; my tongue will guard the secrets confided to me. My art shall not serve to corrupt, nor to assist crime, and I will not yield, under any pretext of persuasion, to prescribing any poison to anyone. I will neither give nor prescribe to any pregnant woman poisonous drugs capable of provoking or producing an abortion. Ever respectful and grateful to my masters, I will hand on

to their children the instructions which I have received from their fathers. May I be respected by men if I remain faithful to my vow. If not, may I be covered with shame and despised. God is witness to what I have said. The oath is finished."

The medical interests of the public are identical with the cardinal principles of medical organization. That is the reason physicians stand for the public health defense, for pure food, pure drugs and pure medical practice. Any political aspirant whose record shows opposition to such measures is an enemy not only to the highest interests of the people, but to the medical profession. The medical profession, in taking an active interest in the present campaign, does not enter politics by advocating a candidate, but defends the principles of its organization by defeating the enemy of medical standards.—*Ohio State Medical Journal*.



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JANUARY

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### Editorial

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The fourth great work which has been undertaken by the American Medical Association is the enlightenment of the public on those essential principles of medicine which relate to sanitation and the preservation of public health. It is only within recent years—since the beginning of the new era in medicine—that our profession has awakened to the sense of duty toward our fellowmen, and gradually the idea has become universally recognized by physicians that they owe it to humanity to take the lead in questions of public health. If they do not lead, others will, and public sentiment will become awry. What mean the astonishing growth of Eddyism, the rapid spread of osteopathy and the pernicious activity of so-called optometry? Is it not that these various forms of quackery are welcomed by the public, because the medical profession has failed to supply a certain need? Why has the Emmanuel movement taken the country by storm? Its principles are not new, for every true physician has employed them since the time of the Great Physician; it remained, however, for Rev. Worcester and others to exploit these principles in great popular papers, as in the *Ladies' Home Journal*, and in immense lecture halls, until the thing has become a

fad. The good that is in it is in danger of being lost, of being buried under the mass of nonsense which the half-informed followers of Worcester are putting forth in speech and in print. Is not the rapid spread of these cults and systems, good and bad, due to the fact that we have failed to take our rightful position, as leaders and as teachers?

It is a somewhat curious fact that many people who are intelligent and possessed of keen judgment on almost all other subjects, seem to lack ordinary common sense when they come to consider medical questions. One reason for this may be, that the profession has, for years, carried with it an indefinable something, the mystery of which the laity feel it impossible to penetrate. Hence, they follow blindly any leader who may set himself up as such.

The time has come to change all this. The public is ready, as never before, to be instructed and it remains for us to furnish the instruction. In 1906, the Board of Public Instruction of the A. M. A. was formed, and it has been recommended that this board furnish a schedule of lectures and material for them to the various county societies, the lecture-talks to be given by the local physicians. Similar courses have been given with great success in Boston, by the members of the faculty of the Harvard Medical School; in Chicago, by the Chicago Medical Society, and in other cities.

The necessity of educating the public is thus stated by Pepper in an address delivered in Cleveland, in 1894: "It seems evident that to secure a broad, popular recognition of the paramount claims of hygiene and preventive medicine, there must be prosecuted vigorously, an education of the entire community, and there must be exhibited, on the part of physicians, a still higher conception of our duty as public spirited and distinguished citizens."

**An amusing contrast** of the extremes to which enthusiasm for hobbies in surgery can go is afforded by a comparison of two addresses given before the Wayne County Society in the past two years. Some eighteen months ago, Dr. R. L. Morris, of New York, spent an hour telling us of the ravages caused by minute adhesions about the gall bladder, liver, and other organs of the upper abdomen. It was a pleasant address to hear, for the subject was treated in a somewhat poetic vein and expressions such as "there are cobwebs in the attic of the abdomen" rather appealed to the imagination. It seemed so simple to cure our patients who suffer from diverse pains and aches in the epigastrium, by sweeping away the cobwebs from the garret, that we were duly impressed, and were serenely happy in the assurance that the problem had been solved. Just lately, however, we were cruelly awakened from our serenity by Dr. Gant, also from the Post-Graduate School in New York, who told us that the way to cure the ills of the body, abdominally speaking, is to imitate the lowly but industrious spider, and weave a few cobwebs, not only in the attic, but also, if you please, in the cellar or the sub-cellar as well.

The lack of poetic fancy in this latter address was somewhat compensated by the multiplicity of amazing and wonderfully formed compound words which would have delighted the ears of Achilles Rose and other exponents of purity in medical nomenclature. According to Dr. Gant, if we properly translated these numerous Greek expressions, any portion of the large intestine which becomes too prominent, may simply be wadded up and tucked away in some unused corner of the attic or cellar, or if the transverse colon offend by sagging down a bit, it may be hitched up by a loop of rectus muscle passed through the mesentery and around the intestine. There are also other ways too numerous to

mention, of out-spidering the spider.

The enumeration and description of such plastic operations is interesting, but the auditors would have been better able to judge of the utility of the procedures, had the essayist reported the results of his 78 cases in detail, instead of saying that "he had not found time to look them up, but that in general the condition of the patients, after further treatment (in some cases) by means of hydrotherapy, massage, galvanism, etc., was satisfactory."

And yet it is the enthusiast, working at his hobbies, who often blazes the trail in scientific work, and we of the Wayne County Society are fortunate to have it presented to us first hand.



**The recent epidemic of foot-and-mouth disease** among cattle in Wayne county, has been serious enough to attract federal attention and result in local and foreign quarantine, besides visiting a well-known manufacturing drug firm with accusations of its inception. The etiology of the disease is not yet determined, although much work has been done. If it is a micro-organism, it has successfully resisted detection and is too small to be retained in the finest Berkefeld filter. The first description of the symptom complex was made by von Valentine in 1695, and epidemics of it have occurred at frequent intervals in Europe, causing great losses. England has remained free from it since 1892, by means of rigid laws limiting the importation of cattle.

Other terms used synonymously with foot-and-mouth disease are, hoof and mouth disease, epizootic, or aphthæ epizooticæ, aphthous fever, epidemic stomatitis, vesicular aphtha; murrain is a vernacular term for it. The French equivalent is fièvre aphthause, and the German is Maul-und-Klauenseuche. The Italians, Hungarians, Hindus, and other

Asiatics have distinct names for the condition and see it in its endemic form. It is not prevalent in the United States or Canada, and outbreaks hitherto have always been traced to imported cattle, and have mostly been in the east. The last epidemic was in Massachusetts, 1903. Not only cattle, but also sheep, swine, goats, horses, dogs, rabbits, deer, and fowls, are susceptible, and the fact that human beings contract it explains its inclusion in medical treatises.

The infection spreads very rapidly, by means of contact, or by the excreta, stalls, troughs, etc.; it has been known to develop in cattle driven over a road recently traversed by infected animals; the milk is often infectious, but not the flesh. Its occurrence in human beings has often been traced to milk; it is also contracted by inoculating into open wounds on cutaneous or membranous surface. The virus is destroyed by temperature of 60° C. and by drying; it thrives in moisture. In cattle the incubation period is from two to eight days. The lesions consist, first of vesicles, typically in the oral cavity and just above the hoof, also in the esophagus and trachea, and on the udders; secondly, the vesicles may progress to ulceration, with secondary infection and pyemia. Gastro-enteritis, hemorrhagic and degenerative changes in the viscera, pulmonary edema, myocarditis, and dilatation, are sometimes observed at autopsy. The foot lesions are especially liable to pyogenic infection, with deep suppuration, and necrosis of bone.

Foot-and-mouth disease is not dreaded so much on account of its mortality (only 2 to 8%) as its rapid spreading, the severe emaciation, the spoiling of dairy products and market value. Epidemics therefore always result in serious financial losses to cattle owners.

The symptoms in cattle begin with fever, anorexia, roughened coat, nausea, and salivation. The oral mucosa is red-

dened and vesicles appear from the third to the fifth day; they may reach the size of a silver dollar. The foot lesions begin with swelling, soreness and lameness, followed by vesicles, ulcers, and sloughing. Mastication and deglutition are painful and difficult, emaciation rapid, the milk decreased in quantity, and altered in quality. The teats may be infected. Acute pulmonary complications and apoplexy occasionally occur. The disease runs a course of two or three weeks, tending to complete recovery. Other animals than neat-cattle are affected chiefly in the feet, and usually are not so ill.

In man the disease commences with fever and sometimes a chill, anorexia, malaise, diffuse pains, headache, and nausea. If the infection starts in the mouth, as is most often the case from milk contagion, there is first a hyperemia, swelling, and sensation of dryness, followed by the vesicles. The lesions may be distributed to other parts of the body by the fingers. Abrasions and hangnails often become inoculated. There is salivation, and dysphagia, sometimes rhinorrhea, conjunctivitis, swollen lymph glands, colic, diarrhea, and bloody stools. Uncomplicated cases run a mild course, with few symptoms, and recover in eight to fifteen days. Infants are more seriously affected.

Cattle are not immunized by the disease against recurrence, although they develop a temporary immunity in the course of the infection. Artificial immunization has not been placed on a practical basis. The treatment of animals has resolved itself chiefly into prophylactic measures. Rigid isolation of exposed animals is enforced, and ruthless slaughter of those infected; no cattle are allowed to be removed from a locality where the contagion exists, and all dairy products are condemned. Milk is sterilized by heating to boiling point, but it should not be used at all. All excreta



should be destroyed; stables, appurtenances, utensils, etc., are disinfected. The disease in man is treated by isolation and the alleviation of symptoms; cleansing mouth washes are used, silver nitrate to ulcers, and diet and medication to promote nutrition, elimination, and comfort.



**Details of the epidemic in Michigan** are in brief as follows: It was first noticed in Elm, Wayne county; the source of the infection is not as yet stated, but it is probable that the investigation in progress will reveal it. Lavonia township in Wayne, and Oakland township, in Oakland, were the localities affected, and there was a total of over 240 cattle afflicted, every one of which was killed. No other animals and no human beings are known to have contracted the disease. The work of quarantine, slaughter, and disinfection was carried out jointly by federal and state officials. Expert appraisers, one for the government and one for the state, placed valuation upon all slaughtered cattle, and the cost was paid, two-thirds by the national and one-third by the state treasury. While the disease was in progress, no cattle, sheep, or swine, could be shipped out of the state, and no fodder, hides, manure, etc., without thorough disinfection.

At present writing the epidemic has ceased, and there is not a case left. The premises that were frequented by the infected cattle are still under quarantine, but shipments out of the state have been resumed. In the premises that were infected, all old woodwork was torn out and burned; all manure and other refuse was similarly disposed of, while the immovable property was thoroughly saturated with disinfecting solutions of lime wash and carbolic acid, or cresol. Clothing, blankets, etc., were fumigated.

The first cases noticed gave the disease to neighboring cattle that broke their confines. The contagion was next

spread by a man who casually examined some of an infected herd and then carried it to his own. There has been no scientific investigation to determine the nature of the contagion in this epidemic. Before quarantine was established, the infection was carried to Buffalo and thence to localities in Pennsylvania, thence to Maryland. Prompt measures have been taken in each instance to limit the further extension of the disease.

It is thus seen that prophylaxis is again in this disease, as in so many others, the chief therapeutic reliance. Efficient prophylaxis depends upon prompt diagnosis and notification of the authorities. A knowledge of the disease, its symptoms, and its dire consequences, is the chief asset of future battles with the disease, and the proper dissemination of this knowledge should be the aim of every agent of education in the branches of medicine, agriculture, and the Bureau of Animal Industry.

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## Book Notices

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**Gynecology and Abdominal Surgery.** In two large octavos. Edited by Howard A. Kelly, M. D., Professor of Gynecologic Surgery at Johns Hopkins University; and Charles P. Noble, M. D., Clinical Professor of Gynecology at the Woman's Medical College, Philadelphia. Large octavo volume of 862 pages, with 475 original illustrations by Mr. Hermann Becker and Mr. Max Brodel. Philadelphia and London: W. B. Saunders Company, 1908. Per volume: Cloth, \$8.00 net; Half Morocco, \$9.50 net.

The second volume of this work, of which the first appeared a year ago, is a repetition of its excellencies. Written by able men, edited by a master-hand, and published in an elaborate treatise, it is not a student's work, but pre-eminently the surgeon's—his, more than the general practitioner's. Pathology, treatment, surgical technic, are described with indefatigable detail, aided by irreproachable pictures, but diagnosis, the interpretation of symptoms, the classing of conditions according to clinical manifestations,—these are of minor importance in the arrangement of the work, and occupy little space.

The chapters are as follows:

Complications following Operations, by Dr. G. Brown Miller; Cesarean Section and Porro-Cesarean Section, by J. F. W. Ross, M. D.; Operations During Pregnancy, by Ricahrd C. Norris, M. D.; The Operative Treatment of Sepsis in the Child-Bearing Period, by Barton Cooke Hirst, M. D.; Extrauterine Pregnancy, by J. Whitridge Williams, M. D.; Diseases of the Female Breast, by J. C. Bloodgood, M. D.; Operations upon the Gall-Bladder, Bile-Ducts, and Liver, by Albert J. Ochsner, M. D.; Operations Upon the Stomach, by B. G. A. Moynihan, F. R. C. S.; Pyloroplasty, by J. M. F. Finney, M. D.; Intestinal Surgery, by John B. Murphy, M. D.; Operations for the Diseases of the Vermiform Appendix, by Howard A. Kelly, M. D., and Elizabeth Hurdon, M. D.; Surgery of the Pancreas, by Eugene L. Opie, M. D.; Surgical Treatment of the Diseases of the Pancreas, by Stephen H. Watts, M. D.; Operations Upon the Spleen, by Howard A. Kelly, M. D.; Tuberculosis of the Peritoneum, by George Ben Johnston, M. D.; Penetrating Wounds of the Abdomen, by Floyd W. McRea, M. D.; Hernia, by Guy L. Hunner, M. D.; Operations for Inguinal Hernia in Men, by Edward Martin, M. D.; The Use of Drainage in Abdominal and Pelvic Surgery, by Brooke M. Anspach, M. D.; The Surgery of the Ureter, by Howard A. Kelly, M. D.; Surgery of the Kidney, by Charles P. Noble, M. D., and Brooke P. Anspach, M. D.

The chapter on the breast is conspicuous for its up-to-date, scientific, presentation of mammary pathology; the author has worked out a good classification, and illustrated it by a wealth of reproductions of gross and microscopic preparations. The description of gastric surgery is similarly good, and the enthusiast over gastric analysis will be suitably cooled by reading Moynihan's conservative opinion of it. Murphy's article on intestinal surgery is thorough, though somewhat familiar. Surgery of the ureter is worth reading.

Helpful bibliography is appended to many chapters, making it easy for one who wishes to consult original sources. The two volumes complete a work of reference that is remarkably good, and should not be overlooked by any one who desires a real knowledge of gynecology and abdominal surgery.

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**A Text-Book of Operative Surgery.** Covering the Surgical Anatomy and Operative Technic Involved in the Operations of General Surgery.

Written for Students and Practitioners. By Warren Stone Bickham, Phar. M., M. D. Visiting Surgeon to Charity and Touro Hospitals, New Orleans. Octavo of 1206 pages, with 854 illustrations, entirely original. Philadelphia: W. B. Saunders Company, 1908. Cloth, 6.50 net; Half Morocco, \$8.00 net.

The third edition of this work contains 1204 pages, over 200 more than the previous issue, and about 600 more illustrations. As stated in the preface, the changes comprise the omission of 29 pages of text, covering 25 operations, and the omission of 42 old pictures; the addition of 123 pages of text, describing 106 operations, and 331 new pictures.

The book is arranged in two parts, the first entitled "The Operations of General Surgery," including operations upon vessels, lymphatics, nerves, bones, joints, muscles, tendons, ligaments, fasciae, bursae, amputations, disarticulations, excisions; the second, entitled "The Operations of Special Surgery," including operations on the head, spine, neck, thorax, abdomen, pelvis, genital organs, and hernia.

There is a succinct exposition of the surgical anatomy in connection with all operations, which is a valuable feature, especially since the anatomical illustrations are profuse and excellent. Many of the most recent operations are described, as well as new modifications and improved technic. All descriptions are relatively brief, as is necessary in a one volume work, but they are quite comprehensive. All matters pertaining to pathology and diagnosis are of course omitted; there is also no discussion of the relative advantages of different procedures for the same object. Usually the author selects one good method and concentrates upon it.

The illustrations are conspicuously numerous and efficient, many of them new; some of the color-print details have been handled a trifle carelessly in the anatomical drawings, so that the color does not overlie its proper part. The index is insufficient.

The work is very commendable, especially for rapid reference among students and casual operators. The author deserves much credit for painstaking, accurate, labor.

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**Consumption: How to Prevent It and How to Live With It.** By N. S. Davis, A.M., M.D., Professor of Principles and Practice of Medicine, Northwestern University Medical School. Chicago. Second edition, 12mo, 172 pages. F. A. Davis Company, Publishers, Philadelphia. Cloth, \$1.00.

This was one of the earliest semi-popular books on tuberculosis. It appeared in 1891 at a time when there was not a fraction of the public interest in the subject which is now manifest. It has now been revised and contains much valuable information, not only for patients, but for physicians as well.

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**A Manual of Clinical Diagnosis.** By James Campbell Todd, M.D., Associate Professor of Pathology, Denver and Gross College of Medicine, Denver. 12 mo. of 319 pages with 131 text-illustrations and 10 colored plates. W. B. Saunders Company, Philadelphia, 1908. Flexible leather, \$2.00 net.

Just why the above title was given to this little book is not apparent. "Manual of Laboratory Diagnosis" would be a more fitting title, for it deals only with laboratory methods. The author describes all the ordinary laboratory procedures in a concise, painstaking manner. It is beautifully printed and bound in limp leather. The illustrations are good.

As a short manual, it is to be recommended.

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**Pathological Technique.** Including Directions for the Performance of Autopsies and for Clinical Diagnosis by Laboratory Methods. By F. B. Mallory, M.D., Associate Professor of Pathology, Harvard Medical School; and J. H. Wright, M.D., Director of the Pathological Laboratory, Massachusetts General Hospital. Fourth Revised Edition. Otavo of 480 pages; illustrated. Philadelphia: W. B. Saunders Company, 1908. Cloth, \$3.00 net.

Mallory and Wright's book is too well known to require an extensive review. It first appeared in 1897 and at once became the guide on laboratory methods. After being once reprinted, it was revised in 1901 and again in 1904. This edition (the fourth) has been brought up to date by the inclusion of various technical processes, chief among which is Wright's method of preparing bacterial vaccines.

The book will remain the best of the laboratory guides.

rium Chapel, in Battle Creek, Tuesday, December 1, 1908. The meeting was attended by over fifty members and as many more interested in medical topics.

The society, as a unit, voted favorably upon the plan for a Medical Defense League as presented by the committee.

The scientific program contained numbers by Dr. Inglis of Detroit, Dr. Barrett of Ann Arbor, and the President's address by Dr. Riley, retiring president.

Dr. Inglis' paper is to appear later in the JOURNAL. It was a practical, up-to-date handling of the subject, "Ergot." Dr. Inglis brought out some very practical suggestions as to the uses to which ergot may be put, emphasizing many of the statements of Dr. Livingston of New York, as to its use.

Dr. Barrett, Director of the State Psychopathic Ward at Ann Arbor, gave a very interesting and practical paper on "The Practice of Psychotherapy."

Dr. Riley's address was entitled, "The Nerve Cell in Health and Disease." It was illustrated with 200 lantern slides especially prepared for the address. Unfortunately, the lateness of the hour obliged an adjournment before the completion of the paper, which will be completed at a later date.

The election of officers for 1909 resulted as follows: President, George B. Gesner, Marshall; Vice-President, Herbert A. Powers, Battle Creek; Secretary-Treasurer, Arthur S. Kimball, Battle Creek. Delegates, W. H. Riley, Battle Creek, and W. C. Marsh, Albion. Alternates, M. A. Mortensen, Battle Creek, and S. R. Eaton, Battle Creek.

The next meeting will be held in Marshall, the first Tuesday in March. The program will be a symposium on "Anesthesia," preparation for which has been under way for three months.

The year closed was the 32nd since the organization. There are 79 in active membership, three in arrears, and three new members admitted for 1909.

A. S. KIMBALL, Sec'y.

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## County Society News

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### Calhoun.

The 32nd annual meeting of the Calhoun County Medical Society was held at the Sanita-

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### Chippewa.

The annual meeting of the Chippewa County Medical Society was held December 1st, at Park Hotel, Sault Ste. Marie. Twelve members were present. The Secretary reported a very prosperous year for the society.



The officers elected for 1909 are as follows: President, J. J. Griffin, Sault Ste. Marie; Vice-President, H. E. Perry, Newberry; Secretary-Treasurer, James Gostanian, Sault Ste. Marie; Delegate, E. H. Webster, Sault Ste. Marie; Alternate, G. J. Dickinson, Sault Ste. Marie.

After the election, the annual banquet was held at which Dr. C. J. Ennis acted as toast-master in his usual jolly manner. All present reported a delightful time.

JAMES GOSTANIAN, Sec'y.

#### Delta.

The Delta County Medical Society held its annual meeting at Elks' Hall, Escanaba, on the evening of December 11, 1908. The officers elected for the ensuing year are as follows: President, H. W. Long, Escanaba; Vice-President, A. J. Carlson, Rapid River; Secretary, W. A. Lemire, Escanaba; Treasurer, G. W. Moll, Foster City; Member Board of Directors, A. S. Kitchen, Escanaba; Delegate to State Meeting, O. C. Breitenbach, Escanaba; Alternate, G. W. Moll, Foster City.

Following the meeting a banquet was served at which the society had as its guests Dr. C. J. Ennis of Sault Ste. Marie and a member of each of the various professions in the county.

A. J. CARLSON, Sec'y.

#### Houghton.

The regular December meeting of the Houghton County Medical Society was held Monday evening, December 7, 1908, at the Arlington Hotel, in Calumet.

The program was a symposium on "Surgical Tuberculosis," divided into three parts.

1. That of the Bones, by Dr. John McRae of Centennial. Discussion opened by Drs. H. M. Joy and A. C. Roche.

2. That of the Joints, by Dr. R. S. Lee of Opechee. Discussion opened by Drs. P. D. Bourland and H. H. Ruonavarra.

3. That of the Glands—Scrofula—especially those of the Neck, by Dr. C. H. Rodi of Calumet. Discussion opened by Drs. L. A. Farnham and Murdock Kerr.

All of the above papers were limited to 15 minutes.

The next annual meeting of this society will be held at the Douglass House, Houghton, Mon-

day evening, January 4th, 1909. A banquet will be given after the reading of the Secretary's report and the election of officers.

Resolutions were also passed at this meeting, authorizing the Secretary to write a letter to the proprietor of the most prominent hotel in the county, thanking him for, and commending his action in refusing accommodations to a quack "genito-urinary specialist," who had applied to him for accommodations for several weeks at the hotel, offering him very attractive remuneration therefor.

W. D. WHITTEN, Sec'y.

#### Ionias.

The Ionias County Medical Society held its first monthly meeting at the Town Club rooms, Ionias, December 10th, with 18 physicians present. The retiring President, Dr. C. B. Gauss, not being able to be present, the meeting was opened with a fine address by Dr. E. F. Beckwith.

Dr. George More read a scholarly paper on "Rabies in Man and Animals." Dr. J. McCann opened the discussion in a masterly manner. Dr. E. W. Ogden's paper on "Galvanism and Faradism in the Treatment of Disease," was well written, clean, concise and comprehensive. Dr. B. O. Erricsson's discussion was in a happy vein showing familiarity with the entire subject. The general discussions following these papers were animated, interesting and instructive.

The following committees made partial reports and were given further time to complete their work: Public Health, Dr. Cope, Chairman; Delinquent Accounts, Dr. Allen, Chairman; Medical Defense, Dr. Gauss, Chairman; The Mann Bill, Dr. Broadfield, Chairman.

Ionias County invites the Fifth Councilor District Association to meet with them at Belding, on the second Thursday in January, 1909, the physicians of the "Silk City" to act as hosts and entertain.

The officers elected for 1909 are as follows: President, E. R. Beckwith, Ionias; First Vice-President, T. R. Allen, Ionias; Second Vice-President, George More, Ionias; Third Vice-President, J. D. Broadfield, Orange; Secretary-Treasurer, C. S. Cope, Ionias; Censors, R. W. Alton, Portland; J. F. Pinkham, Belding; C. B. Gauss, Palo; Delegate, C. S. Cope, Ionias; Alternate, J. E. Furgeson, Belding.

C. S. COPE, Sec'y.

**Jackson.**

At the annual meeting of the Jackson County Medical Society, held at Jackson December 3, 1908, Dr. Charles W. Edmunds of the University of Michigan gave an interesting and instructive address on "Progress in Therapeutics."

Dr. N. H. Williams read a paper on "Some Thoughts in Therapeutics."

Dr. F. W. Rogers, the retiring president, spoke on the "Hypodermic Treatment of Syphilis."

The society endorsed the proposed plan for medical defense as now being worked out by the State Society, and a committee was appointed to investigate the plan adopted in some counties of caring for the indigent poor.

The following officers were elected: President, Dr. E. N. Palmer of Brooklyn; Vice-President, Dr. C. G. Parnall of Jackson; Secretary, Dr. R. Grace Hendrick of Jackson; Treasurer, Dr. A. J. Roberts of Jackson.

R. GRACE HENDRICK, Sec'y.

**Kent.**

The annual meeting of the Kent County Medical Society was held on December 9th, 1908, with 68 members present. The year that has just closed may be aptly termed "Our Banner Year," and one in which the society has been one not in name only, but rather a live, active organization.

The Secretary's annual report showed that during the past year 17 meetings had been held with a total attendance of 474, and an average attendance of 29. At these meetings there were 17 scientific papers read, 37 clinical cases reported, 96 members engaged in the discussion and three invited guests read papers before the society. The Secretary handled 2,588 pieces of mail matter during the year. The special work accomplished by the society was as follows:

The Milk Commission and the Obtaining of Certified Milk.

The Agitation of the Question of Police Ambulance Surgeon.

The Delivery of Anti-tuberculosis Lectures.

The Holding of a Public Meeting on Social Purity.

The Prosecution of Quacks and Quack Advertisements.

The Fifth District Annual Meeting and Banquet.

The Establishment of the Grand Rapids Physicians' Association.

During the year in the notices that have been sent out we have persistently encouraged the reporting of clinical cases with a result that there has been an increased of nine cases reported.

Attendance. In spite of all that has been accomplished, I cannot but feel that there is room for improvement and betterment. The society has a membership of 105. The average attendance has been 29, or in other words about 25 per cent of the members have attended and what has been done has been accomplished by this faithful 25 per cent. The question arises what might we not accomplish with an average of 50 or 75 per cent attendance. Why are the other 75 per cent members?

The sooner we realize that this society is the individual member's society, the sooner we realize that we have other duties than those pertaining to our immediate clientele, the sooner we broaden our mental vision and awaken to the fact that association with our fellow physicians will enable us to mold public opinion and wield an influence in the affairs of our city which is not possible in any other way, then and not till then will our meetings be better attended and inducive to greater good and better work. To accomplish this it is necessary for every member to act as a self appointed missionary and not only unite and attend the meetings, but also induce his neighbor to unite and attend the meetings. The excuse of business is of no avail. The observer of the past will have noticed that whenever an outside guest reads a paper, our average attendance was 56 to 84. Why not such an attendance always? This is your society. Yours if you choose to make it of inestimable value not only to each member but also to our immediate vicinity. Yours if you choose to make it a leader, director and authority in all our civic and public medical problems. Yours also, if you choose, to make it a society in name only. A somnolent, listless, inactive body, a detriment to all connected therewith. This, gentlemen, is your greatest problem for solution during this coming year. Shall we have a better, more active, better attended, stronger scientific and public spirited organization or shall we stagnate in the pool of inactivity? This solution lies with you individually.

The Anti-Tuberculosis Committee through its chairman, Dr. A. H. Williams, in rendering its annual report, stated that at the beginning of the year, the committee, after canvassing the various

features of the Tuberculosis Crusade, decided to work along the lines of public education. A circular letter was addressed to 106 churches and 15 clubs, requesting the opportunity of presenting some phase of the tuberculosis problem to these organizations. It also gave the title of five different papers and a list of 18 voluntary speakers from the society. Thus far six talks have been given in various churches and numerous engagements have been made for the winter's campaign.

The Committee on Public Health and Legislation through its chairman, Dr. S. C. Graves, reported that during the past year the committee had had several conferences with the Board of Education and that the services of the members of this society had been offered to lecture to the students in the high schools upon such subjects as Social Purity, Physiology, Personal Hygiene, etc. The chairman of this committee recently read a paper on the "Evils of Medical Quackery" before the class of Applied Christianity of the Fountain St. Baptist Church with the result that this class appointed a committee to work in connection with our society in disposing of this question. The recommendation was also made that during the coming year we hold a public meeting and discuss before the public the various phases of this subject.

The Milk Commission—Dr. C. H. Johnston, Chairman: Some of the work that has been accomplished by this commission was reported in the JOURNAL a few months ago, and consequently it is not necessary to recapitulate the splendid work that has been accomplished by this commission. The commission contemplates having during the winter months a milk competition among the various local dealers and a few months later a milk exhibition along the same lines of the "Tuberculosis Exhibition" that has been exhibited in various places. By means of this exhibition it is hoped that the public will be educated so they may know what certified milk is, its points of distinguishment, etc., etc. The commission will also endeavor to father a bill before our State Legislature restricting and specifying the use of the term "Certified Milk." It is needless to state that the work of this commission is one in which the society takes great pride and feels itself fortunate in having such a hard-working active commission.

Dr. Ralph H. Spencer, our Councilor, in making his address to the society, made the following recommendations:

"1st. I would recommend that the new administration take up and work out some solution for regulating contract practice.

"2nd. Medical Defense Movement. When my attention was first called to this movement I was personally a luke warm supporter, but after looking up the matter more thoroughly, I have become an ardent supporter, mainly on the ground that it would unite the profession into a united front for medical defense.

3rd. That we may keep abreast with the times, I would recommend that you take up at your earliest convenience the matter of Suggestive Therapeutics. This is a matter that is attracting particular attention in the Eastern States under the name of "Emmanuel Movement." When prominent neurologists are giving this matter so much attention, it behooves us to be alert and abreast of the times.

"4th. The matter of admitting homeopathic physicians to our membership should receive your early and favorable consideration."

The retiring President, Dr. George L. McBride, delivered his annual address.

At the last annual meeting the retiring president of this society made the statement that the year which ended with his term of office had been the most successful in the history of the organization. The statement made at that time, no doubt was true and in the natural course of events should have been. A society composed of progressive, educated practitioners of medicine, alive to their own interests and their responsibilities to the public, and actuated as they should be by a desire to maintain the honor of a noble profession, should show a healthy and substantial improvement each successive year. Tonight I desire to make the statement, and I make it without fear of successful contradiction, that the year which this meeting will bring to a close has been the banner year in the history of the K. C. M. S. The credit for this favorable showing is not due to any individual officer, or committee or member, but rather should be ascribed to the harmonious, energetic, and systematic efforts of the various units which go to make up the society. The interest and enthusiasm manifested by the members and the various committees has assisted and encouraged the officers materially in their duties and contributed largely to that success which has attracted the attention not only of the state society but of every other medical society in the State.

But while we congratulate ourselves upon the



work accomplished and the success achieved, we should realize that we have scarcely begun to cover the possible scope of our usefulness.

One of the purposes of this society, as a unit of the state society, should be to unite into one compact organization the entire eligible medical profession of Kent County. Although the number of members in good standing is greater at present than at any previous time since the organization of our society, only about 40 per cent of the desirable material has been gathered in; and of these the average attendance during the past year has been only a trifle over 25 per cent.

The problem of doubling our membership and average attendance is one that should receive our earnest consideration during the coming year. Personally I believe the solution lies in making the meetings so attractive from a social as well as from an educational standpoint that no physician will feel that he can afford to miss them. The question of a broader and more liberal interpretation of the word "eligible" as applied to candidates for membership in the society will probably be submitted for your consideration in the near future. The opinion is gradually gaining ground not only in this State but in every State in the Union, that every legally qualified and reputable physician regardless of school or pathy who is of good moral and professional standing should be eligible for membership in the American Medical Association.

In the November issue of the *Detroit Medical Journal* the following article appears under the title, "The County Society Broadens:"

"At the first November meeting of the Wayne County Medical Society a highly important step in advance was made. This was the vote to amend that article of the Constitution relating to membership. Now every physician residing and practicing in Wayne County and legally registering as such, who is in good professional standing, shall be eligible for membership. This mentions no school or 'pathy.' Any honest physician whose work meets the approbation of his fellow practitioners who now belong to the society, may be admitted. The fact that such an amendment could be carried is in itself a very significant fact, indicative of the wider tolerance of the modern profession. Here is evidence that we are progressing toward that dignified and unified profession which shall come when gross errors are eliminated and the truth prevails."

At a meeting of the county secretaries of the State held in Detroit, Sept. 30th, Dr. S. C. Cope

stated that the Ionia County Society, of which he is secretary, had decreed perpetual amity. To quote his own words: "The 'Homeop.' or the Eclectic is as welcome to stretch his legs under our mahogany, partake of our banquets and smoke our cigars as is the most dyed in the wool regular; and we have made the discovery that he is as wise and witty as the best, that he is a lovable and companionable man, a royal good fellow, we like him and he likes us and so we grow, having good times among ourselves, and finding approval among all the people."

Prominent members of the New York Homeopathic Medical Society have publicly and repeatedly stated that there are now practically no homeopathic practitioners.

Homeopathy having ceased to exist, the time has come when the regular physicians should no longer, by refusing to consult and associate with so-called homeopathic practitioners, recognize their separate existence.

Another purpose of the county society should be to extend medical knowledge and advance medical science. One important factor in the extension of medical knowledge in the county, is the attendance at the society meetings. Although the average attendance during the past year has been 50 per cent greater than that during any previous year, the records show that this average has been only 25 per cent of the membership. If we are to fulfil the purpose of our organization some means must be devised to induce a larger attendance at the meetings. We have observed that whenever the paper of the evening has been furnished by an invited guest, not only has the attendance been doubled but the discussions have been more enthusiastic and profitable. This point should be taken into consideration in the arrangement of the program for the coming year. Dr. Oakman, chairman of the Program Committee, Wayne County, says, "It goes without saying that attractive programs are necessary for the success of a society; the practitioners of any county may be whipped into line for membership, the dues may be efficiently collected, and the officers wisely chosen, but the meetings will not be well patronized unless particular pains is taken with the program."

During the last two years many of the county societies have supplemented the usual program of their meetings by a regular course of post-graduate work. A schedule of study is published weekly in the *Journal of the American Medical Association*, giving suggestions, touching

upon various aspects of medical education, and this or a modified one is made the subject of study and discussion at the weekly meeting. In my opinion this idea if fully developed and carried out would do more than anything else could possibly do to extend medical knowledge and advance medical science. A regular curriculum of studies suitable to the needs of the profession, and sufficient to cover a year's study, could be arranged by the officers of the A. M. A. or some other properly constituted authority, and published from week to week in the *Journal of the American Medical Association*.

A week or two weeks after each journal is received, the outline of study published in it could be taken up at the society meeting, and an hour or two spent upon it in the way of discussions, grinds, quizzes, etc. To carry the idea still further, at the end of each year a thorough examination might be given upon the year's work and certificates issued to those entitled to them. The public would soon learn to know and appreciate their value as an evidence of progressiveness and professional ambition.

If some system similar to this could not only be recommended, but made universal and compulsory as a requisite for remaining in the practice of medicine, it would extend medical knowledge and advance medical science in a way hitherto unknown; it would be a means of separating the chaff from the wheat of the profession and would elevate the practice of medicine to the pedestal where it properly belongs. Owing to the faulty system of medical education, loose medical laws, and lack of desire and incentive to study, in vogue until recent years, there are regularly licensed physicians in every community who are a blight upon the profession and parasites upon the public. Under a system of the kind outlined above the progressive and up-to-date physician of Grand Rapids would be spared the humiliation of hearing a legally qualified medical practitioner who stands on an equal footing with himself in the eyes of the community, publicly deny the microbic origin of any disease, and state that disease producing germs only exist as a product of a diseased imagination. Under such a system the medical profession of our city would not be subjected to ridicule in the eyes of the public by having one of its members who is supposed to be up to the standard of professional education, announce through the columns of the public press that hydrophobia is all a myth, and that the physician or health officer

who recognizes the existence of such a disease is a fit subject for a lunatic asylum. Under such a system the older member of the profession when called in to consult with and advise a younger physician would not be likely to recommend hot poultices and implicit faith in Providence as the most rational treatment for strangulated hernia.

However humiliating the confession may be, that lack of confidence and respect manifested toward us by the laity, is mostly due to weakness in our own ranks; a weakness which would not and could not exist if every physician were compelled to maintain the standard of professional education which the public and the profession as a whole have a right to demand.

During the past year the social feature of the society has not received the attention which its importance demands. This can not be attributed to apathy on the part of the committee in charge of that department, but is due mainly to the usually depleted condition of the treasury, and the fact that refreshments cost money. The promotion of friendly intercourse and fraternalism is a function of the county society with which we cannot afford to dispense; and I would strongly urge upon the members the necessity of adopting some means whereby a fund could be created and maintained for that purpose. I believe nearly every member would be willing to sign an agreement to donate a nickle to this purpose for each time he is absent from the regular meeting; and if so, in this way enough money could be raised without burdening anyone to make the social function a prominent and profitable feature of the society work. I sincerely hope the social committee will take up this matter with a vim during the coming year and furnish us with enough Dutch lunches, banquets and good cheer to make us think life is worth living.

Dr. C. D. Morris of Pontiac, speaking upon the social features of the county program, said, "These things add greatly to the success of a society. Technical papers are all right, they are enlightening, and they indicate the preference of the profession and strengthen our views and impress upon our memories indelibly, facts which we might not otherwise retain; but when we meet in social function we meet the member who we perhaps felt was a monster cursed Indian (and knew so because our patients told us so, and they told us so many times that we were almost inclined to believe it), but at the social function we shake hands with him and talk with him and



find that he is sincere and that he is trying to do the same as we are."

The work of the Committee on Public Health and Legislation, the Antituberculosis Committee and the Milk Commission, the reports of which you have already heard, have been of the highest order, and a credit to the society and county. No one who is not in touch with these committees can appreciate the expenditure of time and gray matter which the faithful and conscientious performance of their duties incurs. It is largely due to their efforts that the public are beginning to realize that the health of the city depends to a great extent upon the medical profession, and that the Kent County Medical Society is alive to the situation.

An important function of the county society should be to educate the public in matters pertaining to public health and sanitation, and the committeeman who performs the duties devolving upon him in this respect must be prepared to preach as well as practice. In May last the chairmen of these committees sent a communication to the society asking for volunteers to deliver talks before local literary societies and a fairly vigorous campaign was carried on. It is to be hoped the work so well inaugurated will be continued with increasing success from year to year and that more members of the society can be enlisted into the service.

As an evidence of what these committees have accomplished I quote the following from an address delivered by the secretary of the State Society in Detroit. He says: "We are to enlighten and direct public opinion in regard to the great problems of state medicine. Are we doing so? Yes, in spots. Why has the Kent County Society come to be looked upon as a leader in questions of public welfare? Because it has a few members who are willing to work. What has been done in Kent, can be done in Wayne, in Saginaw, in Bay, in Kalamazoo and in other counties having within their borders the larger cities. We have done much, yet every year opportunities are being wasted. If they were but grasped we would find the profession becoming more capable and honorable and more useful to the public in the prevention and cure of disease, and in prolonging and adding comfort to life."

The question of the advisability of an increase of fees for medical services and the establishing of a uniform schedule of prices for the guidance of physicians and surgeons was brought before this society in the early part of the pres-

ent year. Owing to the depression in trade and the stringency of the times it was considered advisable to lay the matter on the table until a more opportune time. It was also considered that the profession as a whole, and not the county society should formulate and adopt a bill which would be worthless without the sanction and support of the entire medical profession.

Accordingly this society took up the task of uniting the medical profession of the city into one organization, for mutual protection and benefit. The result was the organization of the Grand Rapids Physicians' Association with a membership of over one hundred. This association has in it the possibilities of enormous benefit to its members and should be supported and encouraged by every physician in the city. Bulletins are published monthly in which are given the names of all parties who have neglected or refused to pay their bills to the members and already the delinquent list contains over fifteen hundred names. Those who are making use of these lists are able to avoid running many worthless accounts, and are able to devote their time and energies to a more profitable purpose. A fee bill will probably be established by the association as soon as practicable.

In March last a committee of three members of this society was appointed to confer with the Board of Police and Fire Commissioners relative to the appointment of an ambulance surgeon. Unfortunately the action was not taken until after the budget had been made up for the year, and as there was no appropriation for the purpose, the board was compelled to reject the proposition. I would advise that the matter be taken up with the board early in the coming year, and if so, in all probability it will receive favorable consideration.

In Chicago the emergency and ambulance service is greatly increased in efficiency by being in charge of the Health Department. The ambulance is always accompanied by a physician prepared to give first aid to the injured and the victims of paralysis or uremia are now taken to the proper place and given prompt medical care, instead of being left to die in a cell at the police station under the impression that they are drunk.

The telephone situation in Grand Rapids is one that should receive the attention of the members of this society as speedily as possible. At present we are burdened with two systems. This is a matter which could be better handled by the Grand Rapids Physicians' Association, but I



would advise that to set the ball rolling the initial step be taken by the society and recommendation made accordingly to the Physicians' Association. The Wayne County Society recently voted unanimously to dispense with one telephone and are having equally as good service at one half the former cost.

During the year this society was called upon to mourn the death of an esteemed honorary member in the person of Dr. George K. Johnson. A noble life, an illustrious career, was exemplified in the high character, the great attainments, the honorable record, the kindly traits and genial disposition of this venerable man who was by common consent the patriarch of the profession in this city. At a special meeting of the society called for the purpose, suitable resolutions of condolence were adopted and these were ordered engraved and sent to the family.

In conclusion, I desire to thank the officers, committees and the individual members for the uniform courtesy and respect shown towards me during my term of office.

The following are the new officers elected for the coming year: President, Collins H. Johnston, Grand Rapids; vice-president, Charles W. Brayman, Cedar Springs; secretary, Frederick C. Warnhuis, Grand Rapids; treasurer, A. Verne Wegner; delegates, first W. J. Dubois, second S. L. Rozema; alternates, first J. C. Kenning, second J. D. Hastie.

F. C. WARNHUIS, *Sec'y*.

#### Lapeer.

The annual meeting of the Lapeer County Medical Society was held at the Graham House, at Lapeer, Oct. 9, 1908.

Papers were given by Dr. Peter Stewart, of Hadley, on "Anaesthetics," and Dr. Wisner, of Columbiaville, on "Indication of the Tongue in Disease." Both papers brought out a very lively discussion.

The officers elected were: President, Dr. S. A. Snow, North Branch; vice-president, Dr. Peter Stewart, Hadley; secretary, Dr. J. Orville Thomas, North Branch; treasurer, Dr. A. O. Bolton, Attica.

J. O. THOMAS, *Sec'y*.

#### Muskegon-Oceana.

At the annual meeting of the Muskegon-Oceana County Medical Society held Friday

evening, December 4, 1908, the following officers were elected for the ensuing year: Dr. J. F. Denslow, of Muskegon, was re-elected president; Dr. W. L. Griffin, of Shelby, was elected vice-president; Dr. V. A. Chapman was re-elected secretary; Dr. Jacob Cutting, of Muskegon, was re-elected treasurer; Dr. F. W. Garber, of Muskegon, was elected delegate; Dr. J. D. Buskirk, of Shelby, was elected alternate delegate; Dr. G. S. Williams was re-elected director for three years.

At the close of the meeting, the annual banquet was held at the Century Club rooms, which was attended by several invited guests. The attendance at the annual meeting and banquet comprised almost the entire membership of the society.

V. A. CHAPMAN, *Sec'y*.

#### Oakland.

At the meeting of the Oakland County Medical Society, held in the Supervisors' Room of the court house in Pontiac, the following officers were elected: President, Clark J. Sutherland, of Clarkston; vice-president, T. E. McDonald, Holly; secretary-treasurer, J. T. Bird, Clarkston.

J. T. BIRD, *Sec'y*.

#### O. M., C. O., R. O.

The annual meeting of the O. M., C. O., R. O. Society was held at Gaylord on December 16th, when the officers for the coming year were elected as follows: President, C. C. Curnalia, Roscommon; vice-president, H. W. Knapp, Johannesburg; secretary-treasurer, A. C. MacKinnon, Lewiston; delegate, C. C. Curnalia; alternate, W. G. Young, Gaylord.

The secretary was instructed to correspond with the physicians of Cheboygan County, extending to them an invitation to join the society.

The members residing in Gaylord served a banquet which was much enjoyed by all in attendance.

The February meeting of the society will be held in Grayling.

A. C. MACKINNON, *Sec'y*.

#### Tuscola.

The officers of the Tuscola County Medical Society for the coming year are as follows:

President, C. W. Clarke, Caro; vice-president, J. H. Hays, Cass City; secretary, M. M. Wickwire, Cass City; treasurer, W. C. Garvin, Millington.  
M. M. WICKWARE, *Sec'y.*

## Correspondence.

Greenville, Mich., December 9, 1908.

To the Editor:—

Some of the members of the Montcalm County Medical Society have been pleased to notice that in the editorial columns of the JOURNAL you called special attention to the stand that the *Detroit Times* has taken on the medical advertising question.

We wish to congratulate Editor Schermerhorn for publishing a cleaner sheet than his competitors, and we hope that this fact can be made known to every member of the Michigan State Medical Society. We believe it to be the duty of every member of our society to uphold such an admirable policy and to give their patronage and recommendation to a clean newspaper.

There is no doubt that the *Times* is making a great financial sacrifice, but we would like to see Editor Schermerhorn make a clean sweep by taking out all of the objectionable advertisements from his paper.

We have before us the *Detroit Times* of November 30, 1908, and have cut out and enclosed some of the advertisements from this issue, such as Goebel's Bottled Beer, Voigt's Beer, Reingold, Dr. Pierce's Golden Medical Discovery, Dr. A. W. Chase's Ointment and Catarrh Powder, Carter's Little Liver Pills, and Castoria.

We would suggest that the *Times* should omit the liquor advertisements in order to prove the sincerity of its claims, because it is a debatable question as to which is the more harmful advertisement—the Goebel's Bottled Beer or the Chichester Pills. Are the medicines of the Peruna type any more objectionable than Pierce's Golden Medical Discovery?

Editor Schermerhorn has certainly made a move in the right direction. Let us help him to go a step farther, for he has a cleaner paper than many of our own medical journals.

Yours fraternally,

F. J. FRALICK, M. D.

## News

The Cooper Medical College, San Francisco, has been merged into Leland Stanford University and will henceforth be known as the school of medicine of that university.

Dr. Carl J. Larson, a member of the staff of Negaunee Hospital, has resigned, and will be succeeded by Dr. P. S. Wilson, of Grand Rapids.

The medical students of the University of Michigan have organized a medical association, called the Medical Review, with membership drawn chiefly from the senior and junior classes.

A State Hospital for Tuberculosis has been recently opened in North Carolina, near Aberdeen, Cumberland County. Patients are already under treatment there.

Dr. J. O. Parker, of Owosso, has been elected captain of Company H, Third Regiment, M. N. G., to succeed Capt. Fred E. Vandine, resigned.

Dr. F. J. McDaniels, of Alpena, had a narrow escape recently, when his automobile collided with a freight engine on a street crossing. The machine was demolished, but the doctor sustained only slight bruising.

An Antituberculosis Society has been formed at Hillsdale, with thirty members, as the result of recent addresses by Dr. Vaughan, of Ann Arbor, and Mr. McDuff, of Jackson. The officers are: Rev. W. F. Jerome, president; Dr. W. H. Sawyer, vice-president; H. C. Blackman, treasurer.

Dr. Switzer, of Grand Rapids, has made arrangements to practice in Fenton, renting the offices formerly occupied by Dr. J. B. Rice.

The Board of Health of Holland has begun the practice of furnishing free to all local physicians a supply of tuberculin for the cutaneous reaction in diagnosis.

Dr. De Lano, health officer of Grand Rapids, while driving his automobile in the evening recently, collided with a street car; he escaped injury, though the auto was badly damaged.

It is said that Dr. J. B. Bradley, upon retiring from the office of Auditor-General in January, will resume the practice of medicine in Eaton Rapids.

Dr. Otto Scherer of Detroit has been appointed a county superintendent of the poor.

Dr. J. F. Sudman, of Kalkaska, is removing to Jackson, where he will be associated in practice with Dr. Haynes.

Dr. Bliss, for 35 years in practice at Fowler and Maple Rapids, has sold his business and purchased the Hemingway Sanitarium at Owosso, of which he will take personal charge.

Recent robberies in Benton Harbor resulted in losses to Drs. Morris, Burke, Enders, and Parsal.

Dr. J. B. Martin, of Traverse City, has been taking a vacation in Detroit and Ann Arbor.

Drs. A. I. Lawbaugh, C. W. Yarrington, and C. H. Rupprecht, of Calumet, spent ten days, in November, at the Mayo's Clinic.

The Houghton County Anti-Tuberculosis Society has instituted a very active campaign to raise funds for a trained visiting nurse from Boston. The sale of Christmas stamps is the means. They expect to realize \$1,000 for them.

The Grand Rapids Public Library has arranged a very attractive course of eight lectures by representatives of various municipal boards and departments, showing the work they do and the money they receive and spend for the city. It is planned to make this the most instructive series of talks on the work of the city government of Grand Rapids ever given. The series will be interesting and instructive not only to taxpayers, but to every one who is interested in municipal problems.

The next meeting of the Northern Tri-State Medical Association will be January 12, 1909, at Ann Arbor, Michigan.

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## Marriages

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George M. Belhemeur, M. D., Negaunee, to Miss Louise C. Wermer, of Lake Linden, November 9.

Dr. Robert M. Gubbins, a physician of Calhoun County, to Mrs. Cora Lutz, at Ceresco, December 12.

Frank S. Bachelor, M. D., to Bertha M. Lypps,

M. D., both resident physicians in the Eastern Michigan Asylum at Pontiac, December 10.

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## Deaths

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James Hall Reed, M. D., University of Louisiana, 1868, and Jefferson Medical College, 1870, later studying in Paris and Heidelberg, died at his home in Battle Creek, November 25, 1908, aged 64, of cirrhosis of the liver.

Dr. Reed was born in 1844, in Warrenton, Va., enlisted in the 14th Mississippi at the outbreak of the war; fought throughout the war, although spending some time in the Federal prison, rising to a lieutenancy from the ranks.

Dr. Reed came of illustrious and patriotic stock, being a grandson of the Hon. Thomas B. Reed, first Attorney-General of Mississippi, and a grandnephew of John C. Calhoun. He was Vice-President, for Michigan, of Jefferson College Alumni, for three years.

Dr. Reed was well known throughout the state for his contributions on diabetes and has written many articles upon that subject. He was a member of the American Medical Association, Michigan State Medical Society and the Calhoun County Medical Society.

Donald David Duggan, Trinity College, Canada, 1895, died at his home in Battle Creek, Michigan, November 2, 1908, of paralysis, aged 38. Dr. Duggan was an active member of the Calhoun County Medical Society since 1897. Two years previous to his location in Battle Creek, he was assistant surgeon in the Children's Hospital in Toronto.

Oliver W. Hatch, M. D., of Cassopolis, for over fifty years a practitioner of medicine, died at his home, November 11, from pneumonia, aged 83.

Granger V. Randall, M. D., of Tecumseh, died suddenly at his home, November 25, from pleurisy, aged 50.

Dennis J. Boudrean, M. D., of Newberry, died at his home, November 19, from typhoid fever, aged 33.

Oscar Kirchgessner, M. D., formerly associated with Coroner Bennett, of Detroit, died in Denver, December 11, of tuberculosis.



## Progress of Medical Science

### MEDICINE.

Conducted by

T. B. COOLEY, M. D.

#### Diagnosis and Treatment of Pancreatitis—

CHALMERS WATSON refers to his paper in the *British Medical Journal*, April 11, 1908, on Cammidge's glycerose reaction in the urine of patients with pancreatic disease, upon which Mayo Robson places much reliance. The present article is based on over 500 cases studied since that time with reference to this reaction, which he considers of great value. His observations have led him to believe that pancreatic inflammation is more common than is generally supposed—both as a primary disorder or in association with local disease of adjacent parts, such as gall-stones and gastric ulcer, and as an accompaniment to various constitutional disorders.

He does not discuss the fulminating cases of pancreatic disease, which can be relieved only by immediate operation, confining himself to the mildly acute, subacute, and chronic forms. A convenient division is into cases with and without jaundice. A striking point is the great variety of the clinical manifestations, some cases simulating closely severe or pernicious anemia, others showing simply slight indigestion, and perhaps some neuritic pains, still others only a general weakness, with no definite localizing symptoms, so that the urinary findings may be the only guide.

Progressive cases tend to a fatal issue, and probably many patients who were supposed to have died from deep-seated malignant disease were really victims of pancreatitis. He argues with Mayo Robson that catarrhal jaundice may often be due to primary inflammation of the pancreas, and points to the urine reaction and pain on deep pressure over the head of the pancreas as aids in differential diagnosis. He has obtained these same signs in a number of cases of constitutional disease, such as rheumatoid arthritis, gout and alcoholism, and has relieved the symptoms referable to the digestive tract by discontinuing the carbohydrate diet usually given in gouty conditions and feeding more protein.

He emphasizes especially the following points regarding differential diagnosis. In jaundice of doubtful origin: (a) A negative urine test is against pancreatitis; (b) in cases of cholelithiasis a positive reaction indicates pancreatitis, and is a strong evidence that the stone lies at or near the duodenal end of the common duct; (c) where cholelithiasis can be excluded and the clin-

ical features point to organic disease of the pancreas, a negative reaction indicates malignancy.

Glycosuria is more common in inflammatory conditions of the gland than in malignant disease, but may be present in late stages of malignant disease.

The pain of pancreatic disease is referred to the epigastrium and radiates to the left, while the pain in disease of the gall-bladder and ducts is referred to the right hypochondrium and radiates to the right.

An acute onset with pain and pyrexia points to an inflammatory affection.

Emaciation, anemia, and asthenia may be marked in pancreatitis as in advanced malignant disease.

In not a few cases of indigestion with flatulence, abdominal discomfort or pain having no distinct relation to food, constipation, and sometimes pale, fetid movements, the primary trouble is in the pancreas. Pain on deep pressure over the head of the gland is a prominent feature in these cases.

As to treatment, he recommends light diet, chiefly proteid, with calomel and a morning saline for a few days at the onset. The bowels should be attended to throughout, and enemata or flushes may be of service. He considers the Metchnikoff "lacto-bacilline" sour milk preparation valuable to improve the intestinal condition. Pain is treated by fomentations, ice-bags, or morphine when necessary. Excretion by skin and kidneys should be encouraged.

Cases which do not respond to medical treatment require operative handling. The operation may be simply opening the abdomen and manipulating the gland freely, loosening adhesions and relieving tension, or it may be a temporary or permanent drainage of the gall-bladder when the duct is obstructed by the pancreatic swelling. He thinks that caution should be used in recommending operation in the cases without jaundice in which the leading features are gastric symptoms, some constitutional disturbance, pancreatic reaction in the urine, and perhaps occasional glycosuria. Robson and Cammidge have strongly advised operation under these conditions, but Watson thinks medical treatment should be given a thorough trial first.—*Lancet*, Nov. 21, 1908.

## SURGERY.

Conducted by

C. S. OAKMAN, M. D.

**Peritonitis in Children from Unknown Sites of Infection.**—Dowd gives a few case reports which present interesting problems of diagnosis, etiology, prognosis, and treatment. "Children are more likely to have rapidly spreading, insidious forms of peritonitis than are adults, since they are less likely to be constipated during its course, and hence have less of that tympanites which is so hard for the patient, but which is tell-tale to the doctor. They are much more likely to have associated cerebral symptoms, so that very competent observers are sometimes at a loss whether a given case is to be considered as primarily cerebral or abdominal. Again pulmonary inflammation is often accompanied by localized and abdominal pain and rigidity, so that children with beginning pneumonia are believed to have appendicitis. Pneumococcus peritonitis, either isolated or associated with other pneumococcus inflammation, is much more common in children than in adults. General gonococcus peritonitis is occasionally found. Tubercular peritonitis is common, and sometimes presents symptoms which are most difficult to interpret."

Other similar cases are reported in literature, and they are almost invariably fatal, especially the streptococcus form. The best pediatricists and surgeons fail sometimes to recognize the condition, on account of the deceptive signs and symptoms stated above. But fewer cases will be missed if we bear in mind the significance of excessive vomiting, prostration, and diarrhea, disregarding of the absence of distention, rigidity, and spasm.

The mode of infection is generally thought to be through the intestinal wall; this is supported by the frequent occurrence of infection of hernial sacs. When the bowel is distended, the blood supply retarded, virulent organisms in the intestine, and the intestinal contents favorable for multiplication, the conditions predispose to infection of the peritoneum. These conditions are more likely to occur in the appendix than anywhere else. Experimentation lends probability

to this theory of the etiology.—*Annals of Surgery*, December, 1908.

**An Experimental Study of Intraperitoneal Diffusion.**—J. L. YATES conducted a series of experiments on dogs, to ascertain the effects of diffusion and absorption, first, of posture; second, of gastro-intestinal activity, as influenced by food, starvation, and morphine. The injection material was a suspension of lamp-black in .85% saline solution, with the dried venom of the water-moccasin snake, and the cobra. Parallel observations were made upon animals that were kept in the dorsal, the head elevated, and the head lowered postures; and upon animals that were fed, starved, and morphinized.

He concludes:

1. Intraperitoneal diffusion results from the operation of purely physical forces, abetted by physiological activities.
2. The greatest attainable restriction of this diffusion must result from the opposition of controllable physical force to the paths of greatest extension and the inhibition of physiological activities.
3. Under similar conditions the rate of absorption varies directly with the extension of diffusion.
4. The restriction of diffusion and consequent absorption is best obtained by the action of generous doses of opium to reinforce the diminished activity in an empty alimentary canal, general bodily quiet with its resultant lessened respiration, and by the maintenance of that position of the body which will oppose the action of gravity to the direction of most disadvantageous extension.
5. The absorption of toxins is dangerous in proportion to the rate and extent of that absorption and, although this is complicated by pathological processes, it is limited by the application of the principles stated above.—*Surg. Gyn. & Obst.*, Nov. '08.



## GYNECOLOGY AND OBSTETRICS.

Conducted by

B. R. SCHENCK, M. D.

**Local Anesthesia in Major Surgery, with Especial Reference to Abdominal Work.**—

SCHLEY of New York advocates the more extended use of local anesthesia in surgery. Many cases can be operated on by this method that would be impossible under general anesthesia, on account of heart, lung, or kidney lesions. Shock is much less by this method, there is absence of gastric and respiratory disturbances, and a much more agreeable post-operative period is obtained. This method must be used in selected cases, the character of the disease, of the patient, and the surroundings being factors that affect the choice. The author has done several abdominal operations successfully under local anesthesia, of which he gives a detailed account. Gentleness of handling of the tissues is necessary. The patient feels no pain, and is not made nervous by the technic if properly managed. A very small amount of ether may be needed in some cases, for its mental effect chiefly. The peritoneum and intestines are practically devoid of sensitiveness when no inflammatory condition is present. One hour before operation a small dose of morphine is given. Novocain combined with adrenalin is used for injections into the skin along the line of incision. At intervals of one-third to one-half inch along this line the needle is inserted perpendicularly and injections made. The tissues remain dry and bloodless, and hemorrhage is saved the patient. The operation is begun after fifteen minutes. No bad effects are ever experienced.—*Medical Record*, December 18, 1908.

**Treatment of Eclampsia.**—FRY, Washington, pleads for prompt evacuation of the uterus in cases of puerperal convulsions. Eliminate pregnancy, he says, and we cut off the source of the toxemia and are in a position successfully to eliminate the poison which has collected in the system, if it has not already gone too far and produced irreparable visceral lesions and damage to the nervous system. The frequency and extent of these lesions bear a close relation to the number of convulsions, hence the importance of early treatment. Since this method has been adopted at the Columbia Hospital, Washington, and in Fry's private practice, he can report 15 cases of eclampsia and one of pre-eclamptic toxemia with only one maternal death, and this last was of a patient practically moribund before the treatment was undertaken. The methods employed to effect prompt delivery were: vaginal Cesarean section in 12 cases; manual dilatation and forceps in 2; multiple incisions, manual dilatation and forceps in 1;

symphysiotomy and forceps in 1. Two cases are reported. The infant mortality is, of course, high by this treatment of immediate delivery, but not more so than with other methods. The mortality of full-term infants was 40 per cent, and of the premature 80 per cent. It is a fair inference to make that still prompter treatment could have lessened the infant mortality.—*J. A. M. A.*, Dec. 12, 1908.

**Primary Ovarian Pregnancy.** The *Lancet Clinic* for December 12, contains the report of a meeting of the Philadelphia Obstetrical Society, held last May, at which Hirst presented a specimen of what he believed to be primary ovarian pregnancy and asked that a committee be appointed from the society to investigate the specimen and determine whether or not it was an instance of impregnation of the ovum, while still in the ovary. Hirst said: Veit, in the "Handbook of Obstetrics" which he wrote for Winkle, can cite but a single case which he thinks is free from all criticism. It is the case of Galliland, presented to the London Obstetrical Society. In the few other cases in which it was claimed there was primary abdominal pregnancy, Veit said they would not stand rigid criticism. In one or two ways the ovum might have extruded from the uterine cavity or from the tube, or quite possibly have been detached from its situation in the ovarian fimbria. In Galliland's case there was no doubt about the implantation of the ovum upon the peritoneal surface of Douglas' pouch. So far as I can see, I have a similar specimen. This ovum was situated just above the utero-sacral ligament on the right side and below the ovary, and extended out almost like a sessile tumor, about one-quarter buried in the peritoneum. The attachment was apparently slight, as it was delivered without much difficulty. There was no hemorrhage, and I had only to sew over the raw surface on the posterior surface of the broad ligament with continuous sutures, after cleaning out the blood clots which filled Douglas' pouch. The operation was witnessed by a number of people. The tubes and ovaries were absolutely unaltered. There was not a single sign of any attachment of this ovum to the ovarian fimbria. It seems to me an impossible proposition that this ovum might have lodged inside the tube and then have completely detached and re-embedded itself in that situation. That is an impossible supposition, and the only approach to an explanation which could throw the least doubt upon this being a primary abdominal pregnancy.



## PEDIATRICS.

Conducted by

R. S. ROWLAND, M. D.

**An Analysis of Four Hundred Cases of Epidemic Meningitis Treated with the Anti-Meningitic Serum.**—The following series of figures of FLEXNER and JOBLING are based upon the analysis of about 400 cases which have arisen in different and widely separate parts. The diagnosis was confirmed by bacteriological examination, and only cases which did not survive the first dose of serum twenty-four hours have been excluded.

There were 75% of recoveries and 25% of deaths. Under one year the death rate was 50%; 1 to 2 years, 42.1%; 2 to 5 years, 23.5%; 5 to 10 years, 11.4%; 10 to 20 years, 23.8%; over 20 years, 26.4%. In general the earlier the injections the better were the results, but the outlook for late cases was not wholly discouraging. FLEXNER and JOBLING found that so long as the diplococcus was present in the meningeal exudate and the mechanical damage to the anatomical structure was not irreparable, the employment of the serum held out hope of benefit. Of the cases treated with the anti-meningitic serum 25% to 30% terminated abruptly, the duration of the active symptoms was about eleven days. There seems little doubt that part of the beneficial effect of the serum injections must arise from the restriction of multiplication and from the greater phagocytosis of the diplococci. This series confirms the conclusions held in the preliminary reports that in the majority of instances recovery is complete and the number of complications small.

DURM concludes from his series of 40 consecutive cases:

(1) The use of Flexner's antiserum is of great value in epidemic cerebro-spinal meningitis. (2) The use of the serum at times aborts the disease, frequently rapidly relieves its symptoms, shortens its course, lessens the liability to sequelae, and greatly reduces the mortality; (3) The serum should be used as early as possible in all cases, even of suspected meningitis. (4) It should be frequently repeated as long as there are symptoms or any tendency to relapse. (5) Late chronic cases are unfavorable for the use of the serum, but any case in which the diplo-

cocci are present has some hope of relief by its use. (6) In the discussion of papers by Drs. FLEXNER, CHURCHILL, DUNN, and KNOX, Dr. KOPLIK passed the warning that we sometimes lose sight in the presence of some favorable results, of the natural history of the affection, and that in no disease was this more common than in cerebro-spinal meningitis. Dr. HOLT considered the showing very encouraging. Dr. ROTCH said that the injections do no harm and advised repeating them within the twenty-four hours in extreme cases. Dr. MORSE stated that the disappearance of the organism in the spinal fluid after injection and diminution in the cells indicated the activity of the serum, which should be given early and often. Dr. FOREMAN emphasized that the serum may be of value in very late cases. Dr. KERLEY said we have had brought before us a method of treatment, alleviation and cure, largely the cure, of a disease that we have heretofore looked upon with little or no hope, so far as medical means were concerned. Dr. L. FLEXNER in closing said he did not wish to be put in the position of making an over strong case for the serum, though he believed in it.

As to the manner of production FLEXNER said the serum belongs to the class of bacteriolytic sera, in which we are obliged to use the entire constituent of the organism in its preparation. The serum does not produce neutralization of the toxine according to the law of multiples as in the case of diphtheria and tetanic sera.

In employing a serum of this class it is important to remember that the result depends to a considerable degree upon the concentration. FLEXNER believes that the success which has been achieved by this serum has been in virtue of the fact that you bring a bacteriolytic and somewhat antitoxic substance in contact with the focus of the disease. The thing to be emphasized is that you require this fluid in a certain high degree of concentration, and hence injections made directly into the spinal membranes is the obvious way of accomplishing this desideratum.—*Papers and Discussion at the Meeting of the American Pediatric Society, May, 1909, Archives of Pediatrics, October, 1908.*

## OPHTHALMOLOGY.

Conducted by

W. R. PARKER, M. D.

**Remarks on the Treatment of Affections of the Conjunctiva and Cornea with Jequiritol.**—Jequirity produces conjunctivitis, beginning as an injection of the conjunctiva and finally inflammation and purulent secretion with edema of the lids and enlargement of the pre-auricular lymph node, accompanied by a rise in temperature. This all disappears in from eight to ten days. It was first employed in chronic trachoma with pannus. The serous infiltration of the cornea that is produced favors the absorption of the opacities. Because of the serious results its use in too strong solution has produced, many have abandoned the use of the drug.

The active principle of jequirity is abrin. Some authors think it is an alkaloid, while others think it is a bacillus. The conjunctiva after having received one treatment becomes immune to a second inflammation.

The jequiritol made by Merck constitutes four solutions: one, two, three, and four. Number 2 is ten times stronger than Number 1, and so on.

The author in applying the remedy begins with solution No. 2 and ends with Nos. 3 and 4, using from 1 to 4 drops. Generally during the use of No. 3 the inflammation is produced. If the inflammation is insufficient the procedure is begun again. Twelve cases are reported.—COSMETTATOS, *La Clinique Ophthal*, February, 1908.

**Prophylaxis and Treatment of Gonorrheal Conjunctivitis.**—The author claims that from 15 to 50 per cent of blindness is due to this disease. An outline of his treatment is as follows:

During the stage of infiltration he avoids all irritants, using argyrol 25 per cent solution, saturated boric acid solution or 1-5000 bichloride solution. Cold compression or ice bag, changing to heat if cornea becomes infiltrated. In the

stage of discharge he uses a 10 grain solution of silver nitrate, applying it once daily by means of cotton wrapped on a tooth pick, following with a sodium chlorid solution. The eye must be irrigated from every fifteen minutes to three times a day, depending upon the amount of the discharge. The argyrol solution is dropped in after each washing. In the stage of hypertrophy, cauterization with copper sulphate stick is used. The alum stick may be used.—MICHAEL BEHRMAN, *The Lancet-Clinic*, May, 1908.

**When and How We Use Cycloplegics in Refraction Work.**—A. DUANE, of New York, gives the following conclusions, based on long practical experience and a special series of tests:

1. A cycloplegic should be employed for determining the refraction in practically all cases, not glaucomatous, below 48 years of age and in some cases above this limit.

2. Homatropin in 2 per cent solution, provided it is used with ordinary precaution, is a safe cycloplegic, and if properly used is effective in the vast majority of cases.

3. It should be repeatedly instilled and the examination made not less than an hour after the first instillation, nor until a test of the accommodation has shown that the latter is as completely abolished as possible.

4. The cases in which homatropine proves inefficient are few. They are marked by varying vision and varying acceptances, discrepancies between the subjective tests and the skiascopic findings, and the persistence of an undue amount of accommodation (more than one D) even after prolonged action and repeated instillations.

5. In such cases atropin should be used.—*New York State Journal of Medicine*, July, 1908.

## GENITO-URINARY SURGERY.

Conducted by

W. A. SPITZLEY, M. D.

**Remarks upon the Treatment of Syphilis.—**

Some of the author's remarks are worthy of consideration by every one coming in contact with individuals infected with syphilis.

We may consider syphilis a curable disease of, as yet, an obscure microbic origin, but still we have to face the fact that an individual once infected, though conscientiously treated, carries to his grave a predisposition to various phenomena most indicative of a diathesis with slow tissue change and degeneration.

In the majority of cases of syphilis we can cure the early lesions, we can render the victim a non-infectious member of the community, we can make it possible for healthy offspring to be the product of a desirable union; but we cannot feel sure of even a reasonable immunity from the appearance of sclerotic and gummatous changes in the various viscera, long after the original infection has become an almost forgotten entity, unless the patient has adhered to treatment rigorously and led a hygienic life afterward. It is not expedient to allow a syphilitic patient to consider the condition less grave because the secondary symptoms have been mild or absent. Mercury is the one drug with which to combat syphilis from first to last. Iodine has a very definite position in the treatment of syphilis, but it is not to be compared with mercury. The general management of a syphilitic patient is an art. It requires a very intimate knowledge of the physiological action of the drugs used as well as a great deal of common sense in administering them. We know that the virulence of the disease depends largely upon the patient's resistance and we also know that too much mercury may aid in breaking down that resistance. Thus the patient may be made worse by the very means which we are using to effect a cure.

The administration of mercury should be *intermittent*, the duration of treatment must be *chronic*. As a general rule, four mercurial courses should be given during the first year and three in the second and third years. This of course subject to variations. After this iodine should be given intermittently.

After we have carried our patient along successfully, and there has been no manifestation of the disease for years and we feel justified in discharging him, what instructions shall we give him for his future? In answer to this the advice which Fournier gives to his patients when the inevitable question: "Am I cured?" arises, seems most trite: "Yes, I believe you are cured, as far as I have a right to believe so scientifically. But, whatever may occur in the future, whatever dis-

order may affect your health, remember your former complaint. Never neglect to inform your physician of your special antecedents."—J. BENTLEY SQUIER, M. D., *Amer. Jour. Derm. and G. U. Diseases*, Jan., 1908.

**The Pathology and Cystoscopy of Cystitis Cystica.**—KRETSCHMER of Chicago describes the gross and microscopic changes occurring in this condition, as well as its history and biography. Morgani mentioned it in 1749. Rokitsansky and Klebs recognized it, but not till von Brunn's monograph in 1893 was it carefully studied and expounded. Since then numerous cases have been investigated and the pathology certified.

Grossly, as seen by the cystoscope, the disease shows small bodies projecting from the vesical mucous membrane, varying in size up to .5 c.m. in diameter, usually globular, and yellowish in color. They may be few or many, and similar formations may exist higher in the urinary tract; most often they are seen on the trigonum. They may resemble tubercles or "edema bullosum." These bodies are cystic in character, containing in early stages a thin colorless or yellow fluid, which later may become darker in color and viscid or gelatinous. Pigmentation and calcification have been noted. Microscopically the cysts may be seen on the surface or beneath it; they are lined with flattened epithelium, usually in one layer, especially on the surface, but often in many layers in the deeper portions. The cyst-contents take the eosin stain and resemble colloid. Cysts in the process of formation show smaller cavities, better preserved epithelium, in many layers. The parent structure of the cysts appears to be a nest of epithelial cells, resembling the bladder epithelium, with which they are sometimes seen to be connected. The nests are surrounded by a distinct connective tissue capsule; at their periphery the cells are cylindrical, with large nuclei, and arranged in orderly fashion; towards the centre the cells become more polyhedral and irregularly arranged. Around some nests round-cell infiltration is seen. Occasionally the nests present distinct gland-tubules, but they have no real excretory duct.

As to the origin of these small cysts, the weight of evidence refutes the agency of parasites; it is probable that groups of epithelial cells become detached from the bladder mucosa, either in embryonic life, or as the result of inflammatory or hyperplastic processes; that these detached "nests" degenerate centrally, giving rise to cyst formation.—*Surgery, Gynecology, and Obstetrics*, Sept., '08.



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### DR. WILLIAM PEPPER: AN APPRECIATION\*

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Detroit.

Among all the men whose names adorn the annals of the medical profession in America, there has been none greater than William Pepper, of Philadelphia. As an example of the power of a personality and the influence of one man's life upon a great university, a great city, and a great state, the history of our times can narrate nothing more striking.

The story of his life must prove an inspiration to every man who ardently desires to make the most of life's opportunities. William Pepper was great in three separate and distinct fields of action: as a physician, as an educator, and as a public-spirited citizen. His accomplishments in these three separate fields of activity will be briefly considered.

Like many other famous physicians, he was born into the profession. His father, William Pepper, known as "the elder Pepper," was one of that brilliant group of young Americans who studied under Louis in Paris, with Oliver Wendell Holmes, Jackson, Bowditch, and Waterhouse. The elder Pepper was for many years recognized as the chief consultant in internal medicine in Phila-

delphia and held the professorship in Theory and Practice of Medicine in the University of Pennsylvania from 1860 to 1864, when he died. His early death at the age of 55 years was greatly deplored. The cause of his death, as well as that of several other immediate members of his family, was tuberculosis.

William Pepper's grandfather was a contemporary of Stephen Girard, and with him one of the most wealthy and influential citizens of Philadelphia. He founded the Pepper fortune which has contributed several million dollars to public bequests in Philadelphia. The paternal ancestry was German, the founder of the American branch of the family emigrating from Strassburg. Dr. Pepper's mother was a member of an old and honored Delaware family of English descent, so that he was born a gentleman of wealth and social distinction with a family inheritance of public spirit and high scholarship.

Born in 1843, he entered the academic school of the University of Pennsylvania in 1858 at the age of 15 years, and graduated in 1862, president and second in scholarship in his class. He was a member of Phi Beta Kappa and Zeta Psi. The university had then about seven

\*Read by invitation before the Wayne County Medical Society, at Detroit, November 9, 1908.

hundred students, of whom more than half were in the medical school, the sole distinction of the university. The academic school gave a training but little in advance of the modern high school. In the same year, 1862, he entered the medical school and graduated two years later, in 1864. Among his teachers were his father, Joseph Leidy, Samuel Jackson and D. Hayes Agnew. His father died a few months later. At the age of 21, then, Dr. William Pepper found himself with a rather meagre technical equipment ready to begin his career as a practitioner. He never knew the fear of poverty or necessity as an aid to ambition, but in spite of this, he neglected none of the notable opportunities which came to him. He received many and distinguished honors in his day, but the narration of his life is not of honors received, but of great services rendered at the cost of infinite pains and incessant toil. Titles, offices, and distinctions were to him but other terms for opportunity to further the great objects which were constantly before him.

His first appointment, soon after graduating, was to fill a vacancy as pharmacist to the Pennsylvania Hospital. His eagerness to work and to seize every opportunity to advance himself in his chosen profession is shown by his prompt acceptance of this humble post which might easily have been passed disdainfully by a wealthy young man just graduated from the largest and most famous medical school in the country. However, he performed his duties so satisfactorily that he was shortly after appointed a physician to the Out-Patient Dispensary of the hospital. Thus began a long list of official appointments as physician and teacher. He was next resident physician, that is, an interne in the Pennsylvania Hospital. In 1865 he had typhus fever. In 1866 he was made pathologist to the hospital and later assigned a room in which to give lectures

on Pathological Anatomy. In the same year he was appointed visiting physician to the Philadelphia Hospital, a distinguished honor for so young a man, and shortly after he succeeded D. Hayes Agnew as Curator of the Pennsylvania Hospital. During his incumbency of this office he catalogued all the specimens in the pathological museum of the hospital. This was no small task, as the published catalogue contained 138 pages. After these five years, filled with charitable medical work and close study of the science of his profession, came his first university appointment. He was made lecturer on morbid anatomy at a salary of one hundred dollars.

Shortly after this he was appointed attending physician to the Children's Hospital. In 1868 he was appointed lecturer on clinical medicine in the university at a salary of four hundred dollars per year. The elder Gross in writing a congratulatory letter to Dr. Pepper apropos of this appointment said, among other pleasant things, "No higher compliment was ever bestowed upon a young physician on this continent." Later he gave in addition the course on Physical Diagnosis. He also served some time as editor of the Medical Times and spent summer abroad visiting many famous hospitals.

The buildings of the University at that time were located in the eastern and older part of the city of Philadelphia where they were already becoming crowded, and additional space was limited and expensive. It was proposed that the university be moved to West Philadelphia. Many of the members of the medical faculty were opposed to the change, but the younger element, led by Pepper, were enthusiastic for it. The old quarters were certainly antiquated. The serious difficulty in the way of removing the medical school was the question of the hospital. At this time no medical school in America possessed

hospital as part of its equipment. The University had obtained the privileges of instruction in municipal and private institutions. It was an entirely new departure in this country to advocate the founding of a great hospital primarily for teaching purposes and the care of charity patients. Yet the obvious solution of the moving problem for the university was the erection in the new locality of a university hospital, and this plan was enthusiastically supported by William Pepper. On Dec. 30th, 1870, he responded to the toast "The Medical Department" at the annual dinner of the alumni of the University. In this address he showed evidence of having given careful thought not only to the affair of the medical school but to the university as a whole. He championed the removal of the university, the building of a university hospital and a complete reform in the general management. No doubt these plans, involving as they did the raising of a then enormous sum of money and the upsetting of time-honored precedent, seemed to many of his older hearers visionary. However, six months later the project to raise funds to build a University Hospital was under way. Joint committees of the alumni and faculty met, decided to make the effort and appointed a sub-committee of three to direct the active work of the campaign. Of this committee Dr. William Pepper was appointed chairman. Thus at the age of 27 years with his active professional career just beginning, we find this man placed at the helm in the most momentous effort of the day in his native city and for his alma mater. Here began the extraordinary life activity of the man. From this time forward until his death he carried on his remarkable medical career day by day, and at the same time achieved the most remarkable success as an organizer and builder of a university and a modern city. To this part of his career we shall return

later.

Dr. Pepper's contributions to medical literature were many and valuable. While a complete list of his publications would be perhaps wearisome, one can hardly get a better idea of the tremendous activity of the man than by noticing some of his more important works. In 1866, while resident physician in the Pennsylvania Hospital he published with Drs. Rhoades and Meigs a paper on "The Morphological Changes of the Blood in Malarial Fever." He describes circumscribed pigment deposits which we now know may very well have been the malarial plasmodium. His first hospital report was on the "Fluorescence of Tissues." The lectures on Morbid Anatomy with which his career as a university teacher opened, were published in 1870. His lectures on Clinical Medicine from 1870 to 1876 were reported and published. One of his earliest papers published in 1869 in the *American Journal of the Medical Sciences* was on "Phosphorus Poisoning and Fatty Degeneration." I mention the date especially so that it may be realized how far in advance of modern cellular pathology these keen observations were made.

In 1870 appeared Meigs and Pepper's "Diseases of Children," a large volume which passed through eight editions and was long the standard American text on this branch. Other topics on which he wrote at this time, several of them for the *American Journal of the Medical Sciences*, were "Tracheotomy in Chronic Laryngitis," "Cystic Disease of the Pancreas," "Progressive Muscular Sclerosis," "Sclerosis of the Legs and Feet with Anesthesia and Ataxia," "Scirrhus Pylori," and "Emphysema of the Neck." In 1874 appeared a brilliant bit of work on "Local Treatment of Pulmonary Cavities by Injection Through the Chest Wall." Other papers that year were "Case of Hydrothorax in which Paracentesis was Performed," "Treatment of



Collapse in Cholera," "Rupture of the Aortic Valve," "Chronic Pericarditis," "Operative Treatment of Pleural Effusion." In 1875 he published in the *American Journal of the Medical Sciences* a paper on "Progressive Pernicious Anemia," in which appears, I believe, the first description of the involvement of the bone marrow in this important disease. He delivered in this same year the annual address in medicine before the State Medical Society, and read a very important paper on "Sanitary Relations of Hospitals" before the American Public Health Association. Papers on "Encysted Dropsy of the Abdomen," "Retropharyngeal Abscess," and "Cheyne Stokes Respiration in Tubercular Meningitis" appeared about this time. He was elected Professor of Clinical Medicine in the University in 1876, the position which his father had vacated twelve years before. At this time also began his interest and activity in the question of educational museums for the city of Philadelphia. He was chairman of the committee to organize an art museum, patterned after that in South Kensington, London.

On November 26th, 1875, Dr. Pepper was appointed Medical Director of the great Centennial Exhibition to be held in Philadelphia in 1876. He had under him a staff of six medical officers, and a resident physician. The problems were new and both numerous and perplexing. He was general adviser on sanitary questions, and he was obliged to issue authoritative information on the hygienic condition of Philadelphia. The pamphlet which he wrote was widely distributed and reprinted both in this country and in Europe. A model hospital was erected on the grounds. The success of the medical service was marked. The Exposition lasted nearly six months and was attended by over ten million visitors. Sixty-five hundred patients were received into the Exposition Hospital, and

four died—two with apoplexy and two with valvular disease of the heart. There was much illness among the foreigners resident on the exposition grounds, but none died. It is said that never before did so vast an assemblage meet and disperse on such an occasion with so few disasters. The British Government formally recognized and expressed appreciation of the excellence of the service of the medical staff. The King of Norway and Sweden knighted Dr. Pepper for his achievements in this position. During this summer he also acted as chairman of the local Committee of Arrangements for the Philadelphia meeting of the American Medical Association.

His services in the Medical Directorship of the Centennial were widely recognized as evidence of extraordinary executive ability. His name had now become very familiar to the people of Philadelphia and to many thousands in other parts of the country. The result was a great and sudden increase in his consulting practice which now became extensive and exacting. The activity of his mind and pen, however, continued. We find a paper on "Addison's Disease" published in January, 1877, and shortly after he made the first description in medical literature of the blue line on the gums in argyria. The full title of this paper was "The Administration of Nitrate of Silver and the Occurrence of a Blue Line as the First Sign of Argyria." During this same year he increased his University work by a course of lectures on pathology. Of most importance during this year, however, was the oration which he delivered at the formal opening of the medical school in October. The title of this address was "Higher Medical Education, the True Interest of the Public and of the Profession." He had gathered a great mass of information about medical education abroad. He describes minutely the status of American medical schools in 1876. Compared with

the conditions twenty-five years later, they seem startling. Inefficiency and make-shifts were the order of the day. The evils of the system were widespread and deep-rooted. The method of correction was the theme of this address, which was widely read and copied and undoubtedly had immense influence in the progress of the next few years. All his days Dr. Pepper fought for a higher standard of medical education and few men have influenced it more.

In 1876 a successful case of "Paracentesis of the Pericardium" was published. "Aneurysm of the Thoracic Aorta with Unusual Physical Signs" followed. Other papers appearing about this time were "Catarrhal Jaundice with Special Reference to the Internal Use of Nitrate of Silver," "Functional and Organic Anemias," "Koumyss," "Clinical Study of Exophthalmic Goitre," "Sanitary and Mineral Waters," an exhaustive report made to the American Medical Association, "Treatment of Asthma," "Treatment of Chronic Rheumatism," "Administration of Phosphoric Acid." In 1881 Dr. Pepper was Chairman of the section on medicine of the American Medical Association. The winter before he organized the Charity Ball, a social function which continues to this day to make an annual gift to the medical charities of Philadelphia. In 1883, the University Hospital received \$12,500 from this one ball. In the year 1881 he also began work on Pepper's System of Medicine by American Authors, one of the most successful of medical publications.

One of the most important of his articles appeared in 1883 entitled "A Contribution to the Clinical Study of Typhlitis and Perityphlitis." In it he first called attention to the frequent recurrence of appendicitis. While the indications for operation were not yet definitely worked out, the following sentences show how keen was his appreciation of the proper line of treatment to be fol-

lowed. He said (quoted by Tyson), "The operation is so simple, and when properly performed so free from danger and complications, that it is to be hoped that hereafter the indications for its performance will be more clearly recognized and more constantly borne in mind, not by surgeons only, but by the general practitioners under whose care such cases come, and by whom the necessity for the operation must be recognized. It is not too much to say that the unjustifiable delay permitted in many cases of Typhlitis, while waiting for the more definite detection of suppuration, is the cause of many avoidable deaths." Others of his best known papers were "The Climatological Study of Phthisis in Pennsylvania" and "Cardiocentesis."

In 1892 Dr. Pepper edited the department of medicine, surgery and collateral science in Johnson's Cyclopaedia. In 1893 appeared the first volume of his textbook of medicine by American Teachers. This, also, was immediately and widely successful both in England and this country. The total list of his addresses and contributions including one on "Daniel Drake," which he delivered in Detroit in 1895 before a meeting of the Mississippi Valley Medical Association, numbers about one hundred and seventy.

Dr. Pepper in addition to many other professional honors acted as President of the First Pan-American Medical Congress, which met in Washington in 1893. The great success of this meeting was largely due to Dr. Pepper's herculean efforts. His Presidential address before the Congress was one of his best efforts. Indeed, Osler declared that Pepper's greatest works were really the address on Higher Medical Education, which has already been mentioned, and this one. They have undoubtedly played a great part in professional progress in this country. At the second Congress, which met in Mexico, he was greatly lionized, and after his death a public memorial



service was held for him in the City of Mexico, attended by President Diaz and all his cabinet. Dr. Pepper was a Charter member and early President of the Association of American Physicians, and also of the American Climatological Society.

In 1881 Dr. Pepper was elected Provost of the University of Pennsylvania, and from that time on he wrote many educational papers and addresses not at all medical. His success as the organizer, builder and executive head of a great university was no less distinguished than his professional career. In brief, it may be said that during the thirteen years of Dr. Pepper's provostship (1881-1894) the attendance at the University increased from 981 to 2,180, representing every state in the Union and 38 foreign countries. In 1881 its property was valued at \$1,600,000 and included fifteen acres of land; in 1894 it was \$5,000,000 and fifty-two acres were controlled. Not a single large gift had ever been made to the school before his time, but in 1894 the gifts aggregated over \$1,000,000.00 When Dr. Pepper began, the University had a debt of \$450,000. This was paid.

As Provost he established the following University departments: The Wharton School of Finance and Economy; the Biological Department; the Department of Philosophy; the Veterinary Department; the Training School for Nurses; the Department of Physical Education; the Department of Paleontology and Archeology; the University Library; the Graduate Department for Women; the Department of Hygiene; the Department of Architecture; the Wistar Institute of Anatomy and Biology; the William Pepper Laboratory of Clinical Medicine.

We have already seen how at the age of 27 years (in 1871) he had been placed in charge of raising funds for a University Hospital. A short account of the

methods by which he succeeded in this endeavor will give us an insight into the way he accomplished so much in a short time.

Dr. Pepper began his campaign by writing an appeal for the funds, basing it on the grounds that it was needed for the purposes of medical education; that the city needed the increased hospital accommodation, and that the community would benefit materially from the students who would be attracted. It was thoroughly and well done. The appeal was signed by 109 of the leading citizens of Philadelphia. He next began a campaign to secure funds from the Legislature. The public treasury had never before been appealed to for a hospital. The sensation was new. Meanwhile \$140,000 had been subscribed in Philadelphia. Every medical alumnus of the University in the State was requested to use his influence with his local representatives in the Legislature. The result was an appropriation of \$100,000 on condition that \$250,000 more be raised, the whole sum of \$350,000 to be devoted to the purposes of the hospital. Dr. Pepper thereupon caused a letter of thanks to be presented to each member of the Legislature. This letter was signed by the Philadelphia Committee—about twenty of the most prominent men in the city. The next move was to secure a grant of land on which to place the hospital. For this purpose the city council must be sought. Pepper's diplomatic hand guided the matter through, and five and a half acres of public land were given to the University authorities on condition that fifty free beds for the use of the poor of the city should always be maintained. Dr. Pepper personally solicited money from wealthy individuals and corporations. He wrote innumerable letters and made many calls. He issued a special appeal in 1872 to the lawyers of the city and State, asking them to advise clients in making wills to include the



hospital in their charity bequests. The result of this one appeal has been very large, and bequests have still been coming very recently as a result of Dr. Pepper's letter over thirty years ago.

The effort was so successful that by November, 1872, the \$250,000 had been raised, making the State appropriation available. The whole thing, without precedent in the city's annals, had been done in eighteen months. However, Dr. Pepper now saw that to maintain such a hospital properly a larger endowment would be necessary. The Legislature was again appealed to. After two months of most strenuous campaigning, including bringing the whole Legislature bodily to Philadelphia to view the University, a second grant of \$100,000 was made. Dr. Pepper was then appointed chairman of the building committee and personally superintended the details of building, even the stone-mason contracts being in his own hand-writing. In all, Dr. Pepper raised by personal effort for the hospital during his life \$560,000 in cash besides the land and many indirect gifts and bequests. In soliciting money he worked hard and systematically. In his later days as Provost he kept a card catalog of all the graduates and friends of the University. Scouts were always out getting information for these cards. From them he knew a man's name, reputation, religion, wife, relations, hobbies, business, wealth and how invested. When he sought a gift he constructed his appeal skilfully to the man and the occasion. His letter files tell how versatile was his attack. In the course of his public career he raised over ten million dollars and secured gifts of over one hundred acres of land in what is now the heart of the City of Philadelphia. To this he added a personal gift of over \$500,000 earned in a most exacting profession. He may well be called a Prince of Beggars.

As Provost of the University he not

only raised money but effectually guided the educational aims of the institution. He established formal relations between the University and the Philadelphia public schools. He had found the University a weak, poor, ununified group of schools in much the same condition as sixty years before. In thirteen years he left it one of the greatest of modern universities, thoroughly abreast of the times and in touch with its people. Moreover, he had given it such a momentum that when he retired its progress continued. Time forbids the narration of the many distinguished honors which came to Dr. Pepper in recognition of his great services to education.

Before Dr. Pepper's retirement from the head of the University he had become very enthusiastic about plans for a public library for the city of Philadelphia. He finally undertook the leadership of this movement.

When he began, the library was housed in one room and had two attendants. In eight years there were one hundred and sixty attendants, managing a system composed of a great central library and fourteen branches, which gave out more volumes in that year than any other library in the whole world. Such was the magic influence of Dr. Pepper's genius and hard work! A similar narrative might be told of the Museum of Science and Art and the Philadelphia Commercial Museums. These institutions represent an enormous amount of labor both in their establishment and in the gathering of their collections. In both of these tasks Dr. Pepper was not only interested but was the leader through all their crucial years. These museums are among the finest in the world.

Dr. Pepper founded the William Pepper Memorial Clinical Laboratory as a memorial to his father, but it remains also a memorial to himself. He gave \$50,000 and secured gifts amounting in

all to about \$300,000. To us who claim him as a member of the medical profession, for so long as he lived he was first of all a physician, it seems, as Dr. John S. Billings said, that "this far-seeing, bold-planning man of the silver tongue, and the open hand, will be remembered as the founder of the first distinctive laboratory for research in clinical medicine in this country so long as sickness and death are among the children of men."

The most interesting part of this narrative, dealing with his personality and methods of work, has been reserved for the conclusion. We have seen how this man carried on the largest consultation practice in the country and made many and notable contributions to medical literature, besides occupying for thirty years a chair in one of the greatest medical schools; how at the same time he was Provost of the University of Pennsylvania, transforming it in thirteen years from a small, local institution to a great national university, building for it during this time twenty magnificent buildings and adding to its property forty acres of land in the heart of the city of Philadelphia; and how, finally, with almost equal effort, he caused to be erected and perfected in probably the shortest time such a thing was ever done a great free public library system and a group of educational museums, scarcely equaled in the world. Perhaps a greater service than all these was the uplifting of the public mind of Philadelphia on the questions of public service, education, and ideals of life. Seldom is it vouchsafed to any man to accomplish and bring to fruition in his lifetime such labors as did William Pepper. Contemporary of many distinguished physicians, surgeons, and men of affairs in his native city, among them all he moved rapidly and easily to the first place. Such tasks were accomplished with the greatest labor and difficulty, and at the cost of

personal aims and comfort.

Dr. Pepper was born a gentleman of wealth and leisure, but he was never a snob, and his charm of manner extended to all with whom he came in contact. He was thrown much with railroad men and his considerate treatment of them was shown by his election as an honorary member of the American Brotherhood of Passenger Conductors. These qualities of tact and sympathy and understanding enabled him, with his unquenchable enthusiasm and optimism, to appeal successfully to all classes of men, and no man was too obscure to receive Dr. Pepper's personal attention if he could serve the cause. We have seen how he raised his first money for the University Hospital. He made elaborate preparations against defeat,—when success came he took it as a matter of which he had never a doubt.

Many interesting tales are told of his persuasive powers with reluctant givers. A wealthy man of Philadelphia, Mr. Gibson, subscribed \$10,000 for one of Mr. Pepper's institutions. Later he remarked to a friend that Dr. Pepper's plea was so effective that if the appeal had been for \$50,000 he could not have refused. This came to Dr. Pepper's ears and in a few weeks he had visited Mr. Gibson again, this time taking away with him the subscription for \$50,000.

Dr. Pepper's workday was nineteen hours. Not infrequently under stress he went thirty-six to forty-eight hours without going to bed. He kept four stenographers and a special corps of messenger boys busy. Two stenographers worked only at night, and the most rapid and intense work was usually done between 10 p. m. and 2 a. m. Dictation began with breakfast or before, and one of his stenographers ordinarily accompanied him at all times, taking dictation in the carriage, on the train, or waiting in the station. He attended an unbelievable number of dinners, committee meetings and social

functions of various sorts. Yet they all aided his main purpose. He counted that function a failure which did not bring him a valuable acquaintance or idea. One lady tells of attending a theater party given by Dr. and Mrs. Pepper. Soon after the play began, the Doctor excused himself, returning in a half hour. Shortly he left again and returned. Before the close of the play he was called out a third time, but joined the party at supper. Later, she learned that Dr. Pepper had that evening delivered two formal addresses, one to a class of nurses, and his third retirement was for a consultation.

In spite of this pressure and his ability to command large fees, few men did more medical charity than he. Next to physicians' families, teachers were the objects of his bounty. Any poor school-teacher who came sick to Dr. Pepper could be sure of his best attention and no bill for his services was ever sent. His best known service of this kind was during the last illness of General Sheridan, who was taken sick May, 1888. Dr. Pepper's diary is interesting. The date is July 5th:

"Up at 6:00 a. m.—Bath—breakfast—in office at seven—consultation in office continually until 4:30 p. m., with exception of a committee from Johns Hopkins on organization of hospital from 11:00 to 12:00 and meeting of the Board of Trustees from 12:00 to 1:30—train to Sea Girt 5:00 p. m. Drove to Asbury Park to meet Dr. Wilder in the case of Hon. H. B. Denman at 9:00 p. m.—(paracentesis abdomini)—found telegram calling me to see General Sheridan, then at Delaware Breakwater on a man-of-war, Swartaro. Wired to have a special train sent from Philadelphia to Asbury Park at 11, and wired to have tender at Cape May, twelve miles across the bay to Delaware Breakwater at 3:00 a. m. Started from Asbury at 11:10, reached Camden 1:30, then to Cape May,

ninety miles, 3:30—drove three miles to Cape May Point at 4:00 a. m.—no boat—misunderstanding—back to Cape May—awakened telegraph operator, wired via Philadelphia to send tender at once—dress—breakfast—drove out again, tender there at 6—reached steamer at 7:15—consultation—Sheridan much confused in mind, but recognized me—showed pleasure—left at 8:30—Cape May 9:45; special train off at 10:00, in Philadelphia at 12:30. Consultation until 2:00 p. m., train to New York and 6:30 to Westport—arrived 4:00 a. m., and drove home by East Hill, thirty miles."

General Sheridan was removed to his home in Washington and was visited regularly by Dr. Pepper. The Pennsylvania Railroad during this time made up a "special" for him, consisting of a common traveling coach, which was weighed down at each end with piles of steel rails, thus insuring steadiness. Dr. Pepper was accustomed to board the car at Broad Street Station about 11:00 o'clock in the evening; the road was cleared to Washington and in four hours he was at the bedside of his patient. After the consultation he was brought back in the same train, arriving about 8:00 o'clock in the morning in time to take up the duties of the day. This was kept up until August, when Sheridan died.

When asked for his bill, Dr. Pepper begged permission in a famous letter, to be allowed to present his services in acknowledgment of the patriotic debt owed to General Sheridan by all lovers of their country. He knew that General Sheridan's estate was very small.

One secret of Dr. Pepper's ability to sustain his long hours of work was what he called "muscular relaxation." When overtaken by fatigue whether in office or on train, he possessed the power to drop off to sleep. Many a patient in his consulting-room has been annoyed to have Dr. Pepper excuse himself, lie down on the sofa and in two minutes be asleep.



After five or ten minutes he would wake and renew his work with such interest, vigor and care, that criticism was utterly disarmed.

The last three years of Dr. Pepper's life, and they were among his most productive years, were plagued by almost continual discomfort and disease. Repeated influenza infections had reduced his strength. Protracted bronchitis kept him down for weeks, and finally the agonizing pains of angina pectoris came to haunt him. Yet he kept up a marvelous amount of work.

He died suddenly, July 28th, 1898, at the residence of Mrs. Hearst, in California, whence he had gone in search of renewed health. The following quotation from the autopsy record may be of interest:

"The valves of the heart were healthy, but the coronary arteries were in an advanced state of sclerosis with consequent disease of the myocardium. The right coronary was almost completely occluded at one point by an area of especially intense disease and by a partially organized thrombosis within. There was some

atheroma of the aorta and of the general arterial system throughout the body. The liver was highly sclerotic and the kidneys showed the effects of cardiac failure, being swollen and highly degenerated. The apex of the left lung was greatly puckered and retracted, and embedded in the fibrous tissue which caused the contraction were found several small cheesy foci. These were undoubtedly remains of the tuberculous infection from which he had suffered many years before, and which was thus evidently wholly cured. The arteries of the circle of Willis were sclerosed and calcified in a most remarkable manner. Several of the branches were almost completely occluded and none of them was seemingly of more than half its previous or normal caliber. There was no gross change in appearance in the cerebral substance. The brain was considerably above the average in size."

It seems not too much to say that Dr. Pepper was a truly great man. In him was produced a new type of physician and one of the highest types of citizenship yet seen in this country.

**The Diagnosis of Lupus Vulgaris.**—The diagnosis is ordinarily not difficult to one who has seen a good many of these cases, but occasionally it is not easy to differentiate it from the two diseases which it most resembles, syphilis and epithelioma. In making the diagnosis between these three affections, the age of the patient is frequently significant, lupus being nearly always a disease of early life, while both epithelioma and the late eruption of syphilis which looks like lupus, are more likely to be seen in those past middle life. Lupus is much slower in its progress than either syphilis or epithelioma, the lupus nodules are deeper, of a peculiarly translucent

appearance on pressure and readily break down; the ulcers of lupus are not so deep or so sharp-edged as those of syphilis. The discharge from lupus ulcers is much less in amount than that from syphilitic ulcers, and has not the offensive odor of the latter. The epitheliomatous ulcer is ordinarily a single lesion, with a hard, firm edge, very different in appearance from the nodular masses of lupus. We must remember, however, that epithelioma may develop on a long-standing patch of lupus. I have seen several instances of this. The finding of the tubercle bacillus and the reaction to tuberculin are positive diagnostic features.—Foster, *St. Paul Med. Jour.*, Nov., 1908.

## THE PARATHYROIDS\*

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In any attempt to describe the parathyroids anatomically or clinically it will be necessary to make frequent reference to the thyroid bodies to which they hold such a close anatomical relation, receiving their nerve and blood supply from the same source.

All the older anatomists gave full and accurate descriptions of the thyroids, but none of them mentioned the parathyroids; only anatomies revised or published in the last five or six years make any reference to the latter—and only physiologies of very recent date refer to their function.

While the thyroids have long been known to anatomists, nothing was known of their function until Schiff reported his experience in 1856. He showed that removal of the thyroids from dogs was soon followed by certain characteristic symptoms, such as muscular tremor, apathy, malnutrition, and finally death. He also demonstrated that these evil results following thyroidectomy could be obviated by grafting pieces of thyroid into the body. This knowledge was soon applied to human beings suffering from cretinism and myxedema. This soon led to the discovery of thyroid extract and its administration with many beneficial results. All this was done before parathyroids were known to exist.

Sandstrom, in 1880, gave the first anatomical and histological description of these structures, and eleven years later, 1891, Gley described their clinical importance. Since then a great number of

experiments have been made on dogs, rabbits, rats, goats, sheep, horses, etc., these glands having been found in all mammalia.

These structures are not confined to a definite location and vary in number. They are usually found along the posterior inner border of the thyroid, but may be found above or below the extremes of the gland at some slightly distant point.

In the great majority of the specimens they lie in the connective tissue outside the capsule of the thyroid, but occasionally one may be found imbedded in its surface. They vary in numbers from one or two to five, six, or seven. Forsyth states that they are most numerous during the first year of life, from two to six being found on each side and decrease until the tenth year when two are usually found on a side.

The reports of 626 autopsies of different investigators give the usual number as four, two on each side, posterior to the posterior border of the lateral lobes of the thyroid—and designate them as the superior and inferior—the former being found at the junction of the upper and middle third of thyroid, and the latter at junction of lower and middle third of same structure. The most constant point of location is near the termination of the inferior thyroid artery.

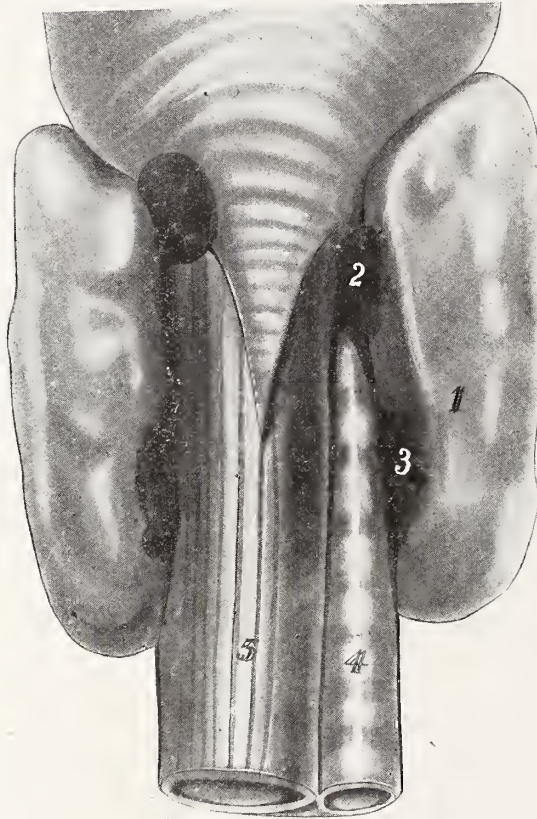
Forsyth, MacCallum, Rogers, Ferguson and Berkely, closely agree on their shape and size. They are flattened, bean or tongue-shaped, of light brown color, and differ greatly in size, from microscopic, to  $\frac{1}{4}$  or  $\frac{1}{2}$ -inch in length. Of the reports of 325 specimens, the average

\* Read before Kent County Medical Society at Grand Rapids, April, 1908.

size was, length 7 mm., width  $3\frac{1}{2}$  mm., and 2 mm. thick. They differ from the thyroid tissue—embryologically, histologically and physiologically.

Rodgers and Ferguson state that they decompose readily or undergo apparent autolysis; hence the ordinary dissecting cadaver cannot be used for their study. This has been my experience in trying

Howell states they are small ductless glands of epithelial character, with a capsule, a blood and lymphatic supply, and that they differ embryologically, histologically and physiologically from the thyroids. Forsyth says they secrete small amounts of colloid material, and are strikingly analogous to the adrenals and pituitary body.



Posterior View Showing Usual Position of Parathyroid.  
1, Thyroid; 2, Superior Parathyroid; 3, Inferior Parathyroid; 4, Trachea; 5, Esophagus.  
(Zuckerkindl)

to find these glands in the dissecting room. In twelve subjects in which we looked for them we found them in only three, and I had begun to think they were not always present, but later noticed this had been the experience of others who used the cadaver for their study. Experienced investigators report one or more in every recent autopsy.

On the physiological side Gley was the first to prove the great importance of the parathyroids. He showed that in rabbits complete extirpation of the thyroid lobes was not followed by a fatal result so long as the parathyroids remained. Removal of both thyroids and parathyroids, however, is in most cases followed by typical symptoms of com-



plete thyroidectomy ending in the death of the animal. This latter result has been contested by some observers, but renewed investigations have demonstrated its accuracy. Gley explains his results on the hypothesis that after removal of the thyroid its function is vicariously assumed by the parathyroids. He concluded, therefore, that the functional value of the two tissues is identical. Recent works, however, tend to throw doubt upon this conclusion. Vassale and Generali state that in dogs and cats removal of all four parathyroids produces the acute symptoms of complete thyroidectomy, and finally causes the death of the animal, in spite of the fact that the thyroid body proper is left practically uninjured. On the other hand, complete removal of the thyroid lobes is not immediately injurious to the animal, provided the parathyroids are left, or in some cases if even only one is left. They contend, therefore, that the result in dogs and cats usually attributed to extirpation of the thyroids is due in reality to the simultaneous removal of the parathyroids.

This result is partly confirmed by the independent experiments of Rouxeau and of Gley. The former finds that in rabbits complete removal of the thyroids alone causes no trouble, at least no immediate trouble, while excision of the external parathyroids alone is followed frequently by death, or by convulsive symptoms. Gley reports some incomplete experiments upon rabbits and dogs that tend in the same direction.

MacCallum states that ordinarily the loss of one or even two parathyroids is followed by no serious results, but the greater the injury done to the glands the more nearly does the patient approach that condition of parathyroid insufficiency which is likely to lead to disturbing symptoms.

In dogs, cats, rabbits, monkeys, and many other animals, complete parathy-

roidectomy is followed within a few days by the condition commonly described as tetany, in which convulsive spasm and rigidity of the muscles of all parts of the body render the animal almost helpless. Respiration becomes exceedingly rapid and labored, profuse salivation occurs, and death supervenes in the attack, although occasionally the violent symptoms gradually give place to a stuporous condition which may last several days, terminating also in death. Temperature and heart-beat are not changed, to any extent. The fact that bleeding or injection of salt solution will relieve the condition and cause the disappearance of the symptoms for a time supports the view of auto-intoxication as the result of removal of the parathyroids. If it is attempted, however, to produce tetany in a dog by transfusing into its veins the blood of a dog in violent tetany, the result is negative, so that evidently there is either a very minute quantity of circulating poison, or else the tetany in the parathyroidectomized dog is due to a poison which rapidly combines itself with certain cells of the body, and is no longer free in the blood.

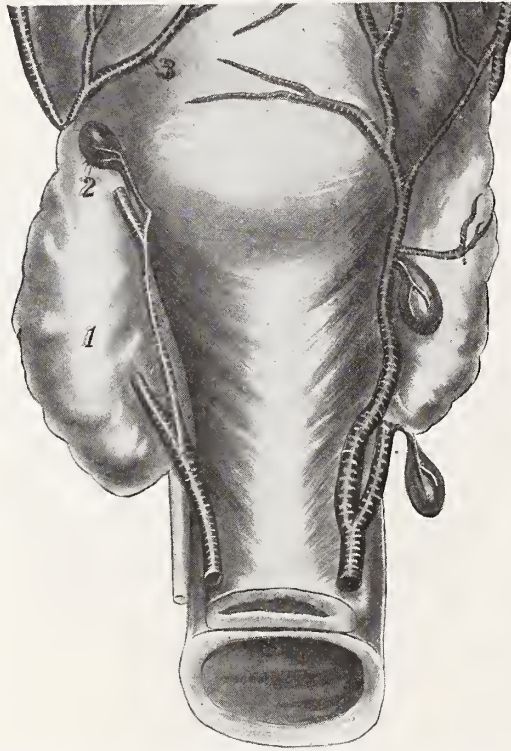
Anent physiology, he says that his operative experience covers between 75 and 100 rabbits, seven dogs, and 14 cats. Wherever we succeed in finding and removing all the glands, the symptoms developed invariably in a more or less typical fashion. Occasionally the animal was desperately and typically ill for half a day, but slowly recovered, developing no more symptoms while under observation. Presumably in these instances a remnant of gland left behind had time to hypertrophy. After removal of one or two parathyroids (partial parathyroidectomy) the autopsy always showed that the glands left behind had enlarged—presumably a compensatory hypertrophy. My own experience is that over seven-eighths of the parathyroid substance must be removed in rabbits in order to

produce the characteristic toxemia.

Erdheim contributed a lengthy experimental study of tetany parathyreopriva. He used white rats because they possess but two parathyroids, and also because they are sufficiently small to permit afterwards of serial sections of the structures of the neck to determine if any parathyroid tissue had been left at

Chvostek says that functional disease of the parathyroids is the most plausible explanation of tetany. He regards mechanical hypersusceptibility of nerves, first the facial, as an easily demonstrable and essential symptom of disease of the parathyroids.

Kocher states that the parathyroids as the originating point of tetany in ani-



Posterior View Showing Blood Supply of Parathyroid.  
1, Thyroid and Inferior Thyroid Artery; 2, Parathyroid; 3, Superior Thyroid Artery (Hoskins).

the time of operation. In more than 30 animals extirpation of both parathyroids was followed by tetany. All animals living from 54 to 162 days showed severe changes in their gnawing teeth which finally lead to fracture beneath or outside of the alveolar process. He concludes that tetany during pregnancy is in relation to the parathyroids; it is a hypoparathyroidism.

mals has, through a number of observations, been shown to be the most probable also for man. It is entirely certain, however, that the cause of myxedema and Basedow's disease lies in lesions of the thyroid instead of the parathyroids.

Yanase examined the thyroids in 89 children showing tetanoid conditions, particularly galvanic changes in the peri-

pheral nerves, or spasmophilia. Hemorrhages in the parathyroids were found in 33 cases, 37%. Yanase asserts that hemorrhages are acquired mainly in post-fetal life, perhaps as with pleural and pericardial ecchymoses, at time of birth. Hemorrhages in these glands can be demonstrated with certainty only during the first year of life; after this the possibility progressively becomes smaller, and after the fifth year one cannot say from histologic study that hemorrhage had ever occurred.

it, and in the parathyroids the organ that neutralizes this poison."

The poison primarily affects the central nervous system, and is therefore, probably analogous to the tetanus poison, inasmuch as it affects the central nervous system, producing tetanic convulsions, and is so rapidly combined with the nerve cells as to be practically undemonstrable in the circulating blood.

Attempts to control the course of the tetany following parathyroidectomy by injection of parathyroid material have



Cross Section Through Thyroid and Parathyroid. 1, Thyroid; 2, Parathyroid; 3, Laryngeal Nerve; 4, Internal Jugular Vein; 5, Carotid Artery. (Gerrish.)

He concludes that between parathyroid hemorrhage and tetany there is doubtless a connection. He explains it as follows: "It has been proved experimentally that the parathyroids are poison destroying organs whose principal function most probably is to neutralize metabolic poisons which are detrimental to the nervous system. Therefore we must recognize in metabolism the origin of the so-called tetany poisons, in the nerves the principal tissue attacked by

been followed by various results. Edmunds gave a large quantity of parathyroid material to an animal in tetany without result. Vassale obtained good results from the emulsion of thyroids in which the parathyroids were included, and Gley confirmed these. Lusena describes several cases in which he prolonged life by transplanting parathyroids or by injecting parathyroid material subcutaneously. The subcutaneous injection of parathyroid emulsion for eight



days and then the subcutaneous transplantation of one parathyroid every fifteen days kept the dog alive for more than four months; others were kept alive for over two months by the implantation of parathyroids.

MacCallum, from a study of these cases by Lusena, as well as experiments of his own, believes that after complete parathyroidectomy the life of the animal can be maintained only with the greatest difficulty by the injection intravenously of relatively large quantities of parathyroid material.

Hemorrhage in the parathyroids does not totally destroy but only partly damages the glands, hence it is not the actual or only cause of tetany, but it can so act as finally to produce that affection. The poison increases because the parathyroid damaged by hemorrhage no longer exerts its usual function. Only in this way can be explained how parathyroid hemorrhage early in postfetal life, leads in many cases to tetany much later in the life of the affected individual.

Experimental study has shown that complete removal of the parathyroids is always followed by acute symptoms, convulsions and early death. The persistence of only one gland may assure its survival. In case of complete removal of the thyroid apparatus (thyro-parathyroidectomy) it is a positive fact that removal of the parathyroids is the cause of the postoperative tetanic symptoms.

The results of removal of the thyroid body alone are different; here we do not have the acute nervous symptoms; the trophic disturbances which follow are of a chronic nature. The symptoms following parathyroidectomy simulate the phenomena of auto-intoxication (Toxicity of serum, hypertoxicity of urine, etc.) It has been observed in man that an insufficiency of parathyroidin prevails in persons operated on by thyroidectomy, and

it is quite likely that there exists a parathyroidin insufficiency.

The tetany symptoms are readily produced in parathyroidectomized dogs by feeding them freely of fresh meat, and it appears from this that there is a toxin introduced into the system which should be neutralized by the parathyroid secretion.

Thompson reports a careful study of the parathyroids in 12 cases of infantile atrophy, controlled by investigation of the glands in 12 other children of the same age, namely from birth to one year. The changes found in the first series were degenerative and sclerotic. The former progressed in some instances to complete loss of cell structure with fusing of the cytoplasm into a mass in which the nuclei were irregularly placed. The most common finding, however, was a pronounced increase in the connective tissue stroma, corresponding closely to chronic fibrous parathyroiditis in the adult. These changes are similar to those in the thymus gland which are constant in infantile atrophy. He does not assert that the parathyroid and other ductless glands are primarily at fault in infantile atrophy, but emphasizes the point that the changes due to mal-assimilation in this affection are more than wasting of fat and muscle.

Anent pathological relation with parathyroids Jeandelise mentions infantile convulsions, epilepsy, tetany, eclampsia and paralysis agitans as worthy of consideration.

MacCallum, in support of the latter hypothesis, reports an autopsy on a case of tetany in an old man dying of extreme dilatation of the stomach. Five good-sized parathyroids were found, all showing numerous mitoses. In view of the rarity of such mitoses in ordinary autopsies, he is disposed to conclude that tetanizing toxins from the stomach had made an extraordinary demand upon these glands, with this result. In the

same paper he reports that in a woman of 39 years, year-long symptoms of tetany, which had been specially trying during pregnancy and menstruation, were relieved by parathyroid medication.

Berkeley has made a therapeutic application of physiologically tested gland

to 11 cases of shaking palsy in all grades of advancement; of these, nine patients were helped, the earlier cases were greatly helped, and one of the author's patients, a very early case, considered himself nearly entirely relieved while under the influence of the drug.

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**Medical Fees in Ancient Greece.**—The remuneration of physicians originally consisted in presents, but at the time of Hippocrates payment in money was already customary. Physicians received also public praise, the "crown of honor," the freedom of the city, the privilege of eating at the king's table. Physicians employed by the State received a yearly salary, as high as \$2,000 in some instances. Rich people would pay enormous sums for a successful treatment, and a case is recorded in which \$200,000 was paid.—*N. Y. Med. Journal*.

Torsion of the testicle is often difficult to diagnose from epididymitis and orchitis. The chief points in favor of the former are its suddenness of development, the early age of most patients, and the absence of any signs of gonorrheal infection of the urethra or prostate.

Although a rigid abdomen is generally characteristic of peritonitis, this applies only to the early period of the disease, since in the later stages or in the severe septic form there is a tendency for the abdomen to again become soft and palpable without pain.—*Int. Jour. of Surgery*.

A STUDY OF TUBERCULOSIS IN THE UNITED STATES BASED ON THE RETURNS OF THE TWELFTH CENSUS—WITH SOME SPECIAL APPLICATIONS TO THE STATE OF MICHIGAN.

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I take pleasure in bringing to the attention of The Journal of the Michigan State Medical Society the results of a paper recently prepared and presented to the International Congress on Tuberculosis. The object of the paper was to indicate a method of analysis of the population and vital statistics furnished by

plies equally well to any other disease when the vital statistics relating to it are known. The results contained in this paper are derived from the "Population and Vital Statistics of the Twelfth Census of the United States," given in Table I.

The investigation relates to males aged twenty and over, and the ages are taken in five-year groups. The table shows that on June 1, 1900, the date of the census enumeration, there were in the United States 3,684,373 young men over twenty and under twenty-five years of age; that in the census year beginning June 1, 1899, and ending May 31, 1900, there were in the United States 25,252 deaths from *all causes* among young men over twenty and under twenty-five years of age and 6,839 of these deaths were due to tuberculosis of the lungs and the balance 18,413 due to other causes. The total deaths from all causes are undoubtedly understated and the deaths from tuberculosis are probably understated to a still greater degree. The effect of this understatement, however, is to a large extent eliminated from the final conclusions reached in this paper for the reason that they are based on the *difference* between two tables, both of which contain the errors of understatement of the question under discussion, and the process of taking the difference practically eliminates these errors. The first step in the reduction of the raw statistical material was to

TABLE I.

MALES				
POPULATION AND VITAL STATISTICS, DRAWN FROM THE TWELFTH CENSUS OF THE UNITED STATES.				
Age Group.	Male Population.	Deaths From All Causes.	Deaths From Tuberculosis of the Lungs.	Deaths From All Causes Except Tuberculosis.
20-24	3,684,373	25,252	6,839	18,413
25-29	3,369,077	24,173	7,154	17,019
30-34	2,931,037	22,349	6,285	16,064
35-39	2,636,434	23,296	5,686	17,610
40-44	2,268,772	22,428	4,547	17,881
45-49	1,845,235	22,529	3,736	18,793
50-54	1,569,273	23,915	3,216	20,699
55-59	1,147,810	24,024	2,608	21,416
60-64	919,645	26,269	2,066	24,203
65-69	668,749	28,563	1,753	26,810
70-74	450,160	28,761	1,291	27,470
75-79	261,863	24,627	755	23,872
80-84	122,454	17,525	308	17,217
85-89	40,799	8,457	99	8,358
90-94	9,888	2,616	25	2,591
95-99	2,432	1,045	11	1,034

the Federal Bureau of the Census to determine the effect of any particular disease upon the community, both from the vital and social point of view. In this paper tuberculosis of the lungs was primarily considered. The method ap-



deduce two mortality tables; one on the assumption that tuberculosis is present in the community, and the other that it is not present. By "tuberculosis present" it must *not* be understood that everybody in the community *has* it, but that the disease is present in the community and every member runs the risk of being exposed to it. This is the condition existing practically everywhere at the present time.

TABLE II.

MORTALITY TABLE WHEN TUBERCULOSIS IS NOT PRESENT, WHEN TUBERCULOSIS IS PRESENT, AND THE DIFFERENCE IN SURVIVORS AT EACH AGE.

Age.	Number Living Tuberculosis		Loss in Survivors at Each Age.
	Not Present.	Present.	
20	100,000	100,000	0
30	95,132	93,311	1821
40	89,479	85,907	3572
50	81,662	76,833	4829
60	69,448	63,947	5501
70	49,437	44,419	5018
80	22,717	19,839	2878
90	4,010	3,415	595
100	101	84	17
104	1	1	0

The third column in Table II exhibits the mortality table when tuberculosis is present. It shows that the group of 100,000 young men living at age twenty is reduced through death from all causes, *including tuberculosis*, to 93,311 at age thirty, to 85,907 at age forty, to 44,419 at age seventy, and to 84 at age one hundred. The mortality table with *deaths from tuberculosis excluded* is shown in the second column of Table II. By "tuberculosis not present" is here meant that there are *no deaths* from this disease; the effect of morbidity due to the presence of the disease in a form not fatal and the increased ravages of other diseases under this favorable condition are still contained in the table just described. The decided improvement shown in survival is due solely to the elimination of cases of tuberculosis with fatal termination. The initial group of 100,000 men at age twenty, under these

conditions, would contain 95,132 survivors at age thirty, 89,479 at age forty, and 101 at age one hundred.

The fourth column gives the difference between the second and third, and shows the loss in survivors due to the presence of tuberculosis. For example, if there were no deaths from tuberculosis there would be 1,821 more survivors at age thirty than at present, 3,572 more at age forty, etc. The completed table would show the maximum increase in survivors to be 5,517 at age sixty-two. The higher ages of the table indicate that the elimination of tuberculosis would have a decided effect on the longevity of the race. At age eighty, the number of survivors is increased from 19,839 to 22,717, that is, by 2,878. This is an increase of more than fourteen per cent. At age ninety the increase is over seventeen per cent. If the data were at hand to construct the table at higher ages with great precision I doubt not that a careful study of the combined effect of tuberculosis and other preventable diseases would show that under more favorable circumstances with these diseases eliminated the age of man could be extended to one hundred and fifty years and even higher. In other words, it is not unlikely that the normal age of man lies somewhere near one hundred and fifty, and that he is now prevented from attaining this age by the presence of a multitude of factors which are coming to be recognized as preventable. By this increase in the period of longevity it must be understood of course that the decline in the vital forces does not begin until a much later time in life than under present conditions, that both mental and physical vigor may normally continue long after age one hundred has been passed, and that the period which now corresponds to the weakness of senility and old age should not arrive under ideal conditions until after age one hundred and twenty-five.

TABLE III.

COMPARATIVE TABLE SHOWING THE DEATH RATE PER ANNUM PER 1,000 PERSONS FOR CERTAIN AGES BETWEEN 20 AND 60; (a) BY THE AMERICAN EXPERIENCE TABLE OF MORTALITY, (b) BY THE UNITED STATES TWELFTH CENSUS RETURNS FOR MALES, WHEN TUBERCULOSIS IS PRESENT, WHEN NOT PRESENT, AND THE DIFFERENCE.

DEATH RATE PER ANNUM PER 1,000.				
Age.	American Experience Table.	When Tuberculosis is—		Difference.
		Present.	Not Present.	
20	7.805	6.040	4.590	1.450
25	8.065	7.020	5.021	1.999
30	8.427	7.416	5.298	2.118
35	8.946	8.320	6.183	2.137
40	9.794	9.417	7.376	2.041
45	11.163	11.211	9.225	1.986
50	13.781	13.926	11.915	2.011
55	18.571	18.471	16.335	2.136
60	26.693	25.177	22.981	2.196

The above table deals with the important matter of death rates. For the purpose of comparison the death rates by the American Experience Mortality Table, the one now employed by most life insurance companies in this country to compute their premiums and reserves, are given. By the death rate as shown in this table is meant the number of deaths occurring in a year in a group of one thousand persons living at the given age. Thus when tuberculosis is present, the death rate at age twenty is 6.040; if tuberculosis were not present, the death rate would be 4.590. This is another way of stating that 1.450 deaths per one thousand of population at this age is due to this disease. The difference column increases slightly, but does not vary much from two per thousand. This shows that advanced age is no protection against tuberculosis. Indeed the danger of exposure to it is somewhat greater at age sixty than at age twenty. Statisticians have not infrequently fallen into the error of comparing the deaths from tuberculosis with deaths from all causes and because this ratio decreases at the higher ages have inferred that tuberculosis is not much to be dreaded after the age of forty. The fact is we

are more likely to notice the disease at age twenty-five because it is the cause of two out of every seven deaths, whereas at age sixty it is the cause of two out of every twenty-five deaths. Other diseases which were not active at age twenty-five are decimating the population at age sixty at the rate of twenty-three per thousand. Moreover, as the population at twenty-five is much larger than at age sixty the *number* of deaths from tuberculosis in the former group is very much larger than in the latter. A glance at Table I will make this point clear. But we cannot compare the mortality of the disease at different ages unless we observe groups at these ages containing precisely the same number of people. According to the table under discussion, in a population of 1,000,000 aged twenty-five, 1,199 deaths would occur within the year from tuberculosis. In a population of 1,000,000 aged sixty, 2,196 deaths would occur from the same cause, or 197 more fatal terminations under like conditions would happen at age sixty than at age twenty-five. It seems essential then that this fallacy should be corrected and the public warned that age is no protection from this disease and exposure to it is attended with more and more danger with increasing age.

TABLE IV.

COMPARATIVE TABLE SHOWING AT CERTAIN AGES THE TOTAL NUMBER OF YEARS OF FUTURE LIFETIME WHICH WILL BE LIVED BY THE SURVIVORS OF 100,000 MALES AT AGE TWENTY.

Age.	Total Future Lifetime in Years When Tuberculosis—		Loss in Years.
	Is Not Present.	Is Present.	
20	4,566,480	4,323,068	243,412
30	3,593,043	3,359,292	233,751
40	2,671,451	2,465,821	205,630
50	1,817,076	1,654,490	162,586
60	1,062,496	952,505	109,991
70	470,064	413,651	56,413
80	121,523	104,768	16,755
90	11,752	9,916	1,836

A subject of particular interest in this connection is the loss in future years of

lifetime due to tuberculosis. A brief consideration is sufficient to show that in a large community thousands of years of lifetime are cut off by the accelerated death of individuals within the group. The actual number of years lost can be easily determined from the mortality tables set forth in Table II, and the results are given in the above Table IV. The table is a comparative one showing at certain ages the total number of years of future lifetime which will be lived by the survivors of one hundred thousand males at age twenty when tuberculosis is not present, and when tuberculosis is present. An examination of the table shows that the survivors at age sixty would have 1,062,496 years of future lifetime before them if tuberculosis were not present, and that under normal conditions with tuberculosis present the survivors at age sixty have 952,505 years of future lifetime to live, a loss of 109,991 years of future lifetime due to the presence of tuberculosis. In like manner, it is seen that at age twenty the total loss in years of future lifetime sustained by a group of 100,000 young men is 243,412 years. A consideration of the column head "Loss in Years" will make clear, even to the layman, how it happens that the presence of tuberculosis can bring financial loss to the community. We have at this age a loss of 243,412 years, most of which occurs before the young men, who are now twenty, attain the age of seventy. Assuming in round numbers for purposes of illustration that 200,000 of these years of future lifetime are lost by the original group of 100,000 survivors aged twenty before they attain age seventy, it is clear that these years are lost during the wealth producing period of life. If each year represents a loss of one hundred dollars in wealth to the nation, we should have a loss on this group of \$20,000,000, the interest factor being neglected. There were in 1900 over 700,000 young men in

this country twenty years of age, accordingly, the loss which the country must expect to sustain on this group, the interest factor being neglected is in round numbers \$140,000,000. In a later table we shall see that the capitalized or present value with interest assumed at five per cent, of the loss on this particular group of young men on a wealth producing basis of one hundred dollars per annum is exactly \$35,332,569. These facts are pointed out at this time in order to emphasize how and where the loss due to tuberculosis or any other disease occurs. The presence of a disease in any group of persons or in any community inevitably decreases the total future lifetime of that group and a direct measure of the loss due to such disease must be found in the *number of years taken out of the life of the group.*

TABLE V.

COMPARATIVE TABLE SHOWING AT CERTAIN AGES THE COMPLETE EXPECTATION OF LIFE AND THE LOSS IN SAME DUE TO THE PRESENCE OF TUBERCULOSIS.

Age.	Complete Expectation of Life When Tuberculosis is—		Loss in	
	Not Present.	Present.	Years.	Days.
20	46.165	43.731	2	158
30	38.269	36.501	1	280
40	30.356	29.203	1	56
50	22.751	22.034		262
60	15.799	15.395		147
70	10.008	9.812		72
80	5.849	5.781		25
90	3.431	3.404		10

It is interesting to examine the effect of tuberculosis on the expectation of life. By the expectation of life at any age is meant the average future or after lifetime at that age. To determine it, therefore, it is only necessary to divide the total years of future lifetime given in Table IV at any age by the number of survivors, given in Table II, at that age, adding one-half year to the quotient to provide for the fact that deaths on the average occur uniformly throughout the year so that in the long run the average length of life *in the year of death*



is six months, or one-half year. The two columns giving the expectation of life in Table V were obtained in this manner. Our chief interest lies, however, not so much in the columns themselves as in their difference, for it is the effect of tuberculosis in shortening the average future lifetime which we are seeking. Although there may be more or less error in the statistics from which the two main columns were derived, these errors being of like nature will mostly disappear in taking the differences of the columns. Considerable reliance therefore may be placed upon the column in Table IV giving the "Loss in Years" of total future lifetime, and in the present table giving the "Loss in Years and Days" in expectation of life. Table V shows that the expectation of life of *every person in the community* aged twenty years is reduced two years and one hundred and fifty-eight days by tuberculosis. Even at age forty, the loss in the expectation of life is one year and fifty-six days, and the figures are not materially reduced, when the age is considered in connection therewith, at the more advanced ages.

Few people are aware of the enormous loss in wealth which this country suffers on account of tuberculosis. The *amount of this loss* has a special significance when considered in connection with the cost of an organized campaign having for its object the practical elimination of tuberculosis. To accomplish this result it is essential that extensive and continuous financial assistance be forthcoming for a considerable period of years, and the question arises as to how much the state or nation would be justified in spending to check the disease within its boundaries. I have considered this subject in some detail and derived tables from the population and vital statistics of the twelfth census of the United States by means of which the monetary loss sustained by a commun-

ity of given population can easily be computed. It is assumed that on the average each male member of the community between the ages twenty and sixty can add, over and above his living expenses, a net sum of one hundred dollars each year to the wealth of the community. This ability to produce wealth is assumed to continue until age seventy and then cease. The total gain which is thus contributed is found for each age, and the equivalent capitalized sum is computed, taking into account the interest factor, five per cent, and the mortality factor, determining the probable length of life. The gain in wealth is first computed on the assumption that there are no deaths from tuberculosis and then again on the assumption that the conditions as regards tuberculosis

TABLE VI.

PRESENT OR CAPITALIZED VALUE AT CERTAIN AGES COMPUTED WITH FIVE PER CENT. INTEREST OF A WEALTH INCREMENT OF \$100 PER ANNUM, CONTINUING UNTIL AGE SEVENTY.

Age.	When Tuberculosis is— Not Present.	Present.	Loss in Value at Each Age.
20	\$1642.29	\$1594.78	\$47.51
25	1,589.44	1543.63	45.81
30	1522.37	1481.16	41.21
35	1438.62	1402.92	35.70
40	1337.78	1308.06	29.72
45	1214.80	1190.59	24.21
50	1066.86	1048.14	18.72
55	887.08	873.88	13.20
60	667.79	660.28	7.51

are those which now prevail. The gain in the former case will, of course, be greater than in the latter because with deaths from tuberculosis eliminated people would live longer and hence contribute for a longer period of years to the wealth of the community. This excess, *which would be realized if there were no deaths from tuberculosis*, is the monetary loss which the community must suffer owing to the presence of the disease. Technically speaking, the difference between the capitalized value of the future

net wealth producing capacity of an individual in a community at a given age, first on the assumption that tuberculosis is not present, and then on the assumption that it is present, is the loss which the community must inevitably sustain on that individual so long as the disease remains unchecked in the community. Table VI gives these figures for certain ages.

The second column shows that if tuberculosis were not present the capitalized value, computed at five per cent, of the yearly \$100 wealth additions produced by the young man aged twenty working until age seventy, would be \$1,642.29, while according to the third column the capitalized value of the annual \$100 wealth increments of the same young man under prevailing conditions, that is, with tuberculosis present, is reduced to \$1,594.78. The difference, which represents the capitalized value of the loss at this age, is \$47.51. The loss appears to decrease with the age, beginning with \$47.51 at age twenty and decreasing to \$7.51 at age sixty. The decrease is not uniform, and it is easily seen that most of the loss is sustained on the group between the ages twenty and forty. This is to be expected, as the younger generation, having an earning capacity until age seventy, will be contributing to the wealth of the nation for a longer period of time. The distinguishing feature of the method here described is that under certain stated conditions the loss in value at *each* age is given. If the conditions were otherwise as to wealth producing capacity, or the age at which it ceases the final results could be computed with equal facility from the mortality tables herein derived. The figures obtained above were first applied to determine the total loss sustained in the United States. I give herewith a table showing the loss for certain age groups, it not being deemed necessary to extend the table to the de-

tail involved in giving each individual age.

TABLE VII.

TABLE SHOWING THE CAPITALIZED OR PRESENT VALUE, COMPOUNDED ANNUALLY AT FIVE PER CENT, OF THE LOSS DUE TO TUBERCULOSIS ON THE MALE POPULATION OF THE UNITED STATES FOR QUINQUENNIAL AGE GROUPS BETWEEN AGES 20 AND 60 ON THE BASIS OF A WEALTH PRODUCING CAPACITY OF \$100 PER ANNUM UNTIL AGE 70.

Age.	Population, 1900	Total Loss.
20-24	3,684,373	\$174,084,182
20-29	6,963,450	322,936,476
20-34	9,894,587	437,914,519
20-39	12,530,921	525,873,205
20-44	14,799,693	588,827,939
20-49	16,644,928	629,784,069
20-54	18,214,201	656,159,169
20-60	19,637,898	671,018,025

An examination of this table shows that at the date of the twelfth census the number of males living over twenty and under twenty-five years of age, that is, in the age group 20-24 was 3,684,373. The loss sustained on this group is \$174,084,182. Table VII also shows that the loss sustained on the age group 20-39 is \$525,873,205, while the loss sustained on the age group 20-60 is \$671,018,025. It thus appears that most of the loss will be sustained on that portion of the group between ages twenty and forty. In order to show more clearly how all the figures in this table were obtained, the fol-

TABLE VIII.

TABLE SHOWING THE CAPITALIZED OR PRESENT VALUE, COMPOUNDED ANNUALLY AT 5%, OF THE LOSS DUE TO TUBERCULOSIS ON THE MALE POPULATION OF THE UNITED STATES FOR AGES 20 TO 24 ON THE BASIS OF A WEALTH PRODUCING CAPACITY OF \$100 PER ANNUM UNTIL AGE 70.

Age.	Population, 1900.	Loss Rate.	Total Loss.
20	743,687	\$47.51	\$35,332,569
21	739,047	47.67	35,230,370
22	745,491	47.49	35,403,368
23	721,847	47.04	33,955,683
24	734,301	46.47	34,122,967
20-24	3,684,373		\$174,084,182

lowing supplementary table is given. It relates only to the group of males over age twenty and under age twenty-five.

There were, according to Table VIII, 743,687 living at age twenty. The loss rate at this age is \$47.51. Multiplying these numbers together we have \$35,332,569 as the present or capitalized value of the loss which will be sustained on this group before they reach age seventy. There were 739,047 in the age group twenty-one. The loss rate is \$47.67, the loss \$35,230,370. At age twenty-two the number living was 745,491, the loss rate \$47.49, the loss \$35,403,368; similarly for ages twenty-three and twenty-four. Adding up the losses sustained on these five ages, we obtain the total loss \$174,084,182 given in the preceding table on the age group 20-24. It appears then that the total loss which will be sustained by the United States on the male population between ages twenty and sixty had a capitalized value at the beginning of this century of \$671,018,025. Since the producing capacity of \$100 per annum was assumed to cease at age seventy all this loss will be sustained during the first half of the present century. The wealth producing basis, of course, is an economic factor more or less subject to variation of opinion. Some writers have taken \$300 to represent the average wealth producing capacity per annum. This would mean a total loss whose present or capitalized value is \$2,013,054,075. While these figures are startling in magnitude, I wish to emphasize that they are more than conservative and may with certainty be set down as *minimum* figures. The chief and almost self-evident circumstances which tend to make the results minimum are the following:

(a) They are based upon *reported* deaths from pulmonary tuberculosis. It is well known that these *reported* cases are considerably below the *actual* number. The Hon. S. N. D. North, director of the Bureau of the Census, says in his report on tuberculosis in the United States, prepared for the International

Congress on Tuberculosis, that "There is a large margin of possible error and probably of understatement in the recorded deaths from tuberculosis even in the registration area." It is unnecessary to go into any detail here as to the causes which lead to the concealment of or failure to return deaths from this disease.

(b) The figures given are based on cases of pulmonary tuberculosis with fatal termination, hence the effect in the decrease in *length* but *not in breadth* of life is considered. It is sufficient to call attention to the fact that the presence of tuberculosis in a community involves a tremendous increase in morbidity; that cases without fatal termination are far more numerous than those with fatal termination; that tuberculous morbidity subjects the community to the attack of other diseases, with the result that many of such cases owing to lowered vitality terminate fatally; that the earning or wealth producing period in both fatal and non-fatal cases of pulmonary tuberculosis or other cases which have invaded the community owing to tuberculous morbidity must necessarily be considerably diminished. The loss rates obtained in the preceding computations are based upon the assumption that the individual can produce wealth at the average rate of \$100 per annum until the age of seventy, but it is clear that the tuberculous individual must be incapacitated whether the case terminates fatally or not for a number of years within the wealth producing period. During these years instead of adding he is actually subtracting wealth from the community. The individual with lowered vitality produces a smaller wealth increment and the individual who cannot work becomes a financial burden upon the community.

(c) The present figures relate only to males between ages twenty and sixty working until age seventy. The loss



due to the burden of tuberculosis on the male population under twenty and over sixty is not counted. As it happens that members of these groups are largely dependent upon the productive capacity of the main group between ages twenty and sixty, it follows that tuberculosis in these dependent groups must serve to produce a greater drain upon the supporting group.

(d) The loss results refer to a *fixed time* and to a *particular group*, namely, the present value of the future loss which will be sustained on the *group living at that fixed time between ages twenty and sixty*. It is evident that as this group moves on in time, other groups of the living will come in, and upon these new groups additional losses will be sustained. For example, the group now living between ages 15-19 in five years will be a group between ages 20-24, a group upon which we have seen the loss is very great.

(e) The monetary loss due to tuberculosis among females has not been considered at all. When the appropriate statistical material is available, the methods set forth in this paper may be employed to determine the loss on all these omitted factors, but for the purpose of clearness of presentation it was decided to confine the attention to the definite group of wage-earners between ages twenty and sixty. The results obtained on this group are comparatively free from the criticism of personal estimate. Moreover, with all the elements above mentioned omitted, the magnitude of these minimum figures should be sufficiently great to sharply call the attention of our legislative bodies and others in authority to the fact that they have here a great problem confronting them. In addition to the suffering, misery, and untimely death, due to tuberculosis, the country is constantly subjected to a tremendous financial drain. If the minimum value of this financial loss can be

determined are we not justified in expending a large fraction of this minimum amount, if it can be shown that such expenditure will result in the elimination of a corresponding proportion of the fatal terminations from tuberculosis? The loss in the state of Michigan, computed in accordance with the preceding methods is \$22,000,996, and the loss in Wayne County is \$3,308,412. This means that the state of Michigan, beginning with this century will sustain on the group of men then living between ages twenty and sixty a monetary loss whose value, computed at 5%, at the beginning of the century was in round numbers \$22,000,000. Another way of putting this is that Michigan is certain to be poorer by \$22,000,000 unless the disease is checked and that *the state cannot afford* to remain idle and submit to this drain. The city of Detroit alone bears \$2,682,891 of this burden, and its weight with a growing population is bound to increase unless unusual measures are taken to lower the tuberculosis death rate.

The practical question arises as to what the annual loss may be. I give in the following table both the total and annual losses for certain areas. The annual loss is obtained by merely spreading the total loss over a period of fifty years, and is the annual payment on a fifty-year annuity whose present value computed at 5% is equal to the total loss heretofore given. Fifty years was se-

TABLE IX.

MINIMUM ANNUAL AND TOTAL LOSSES ON TUBERCULOSIS.		
	Annual Loss.	Total Loss.
United States.....	\$36,756,228	\$671,018,025
Michigan .....	1,205,144	22,000,996
Detroit .....	146,960	2,682,891

lected as the maximum length of time within which the loss would be sustained, because those who are now twenty and over will have attained or passed

the age of seventy after the lapse of fifty years. It is evident that the actual annual loss is not uniform, but will be heavier in the earlier than in the later part of this fifty-year period.

The table shows that the annual minimum loss in the United States is about \$37,000,000, in Michigan something in excess of \$1,000,000 and in the city of Detroit about \$150,000. Applying these figures more directly to our own state we may say without fear of exaggeration and indeed with greatest conservatism that the state of Michigan can well afford to expend \$1,000,000 each year in a campaign against this disease so planned as to bring about its practical extermination by the end of half a century. The share of the City of Detroit in this expenditure would be about \$150,000 per annum. The state and city are certainly going to lose these amounts each year, and more, if tuberculosis remains unchecked, so that to remain inactive is only to court financial loss.

Fortunately the state of Michigan, its counties and cities, including the city of Detroit, enjoy at the present time about the lowest tuberculosis death rate in the country, the rate for the state being about one-half the average death rate from this disease throughout the United States. This condition should inspire the state and its municipalities to renewed energy and a determination to still further reduce the loss. It seems to me that it is well worth while for our legislative and municipal authorities to give this matter their serious consideration, and deal with it in a manner whose scope is appropriate to the magnitude of the questions involved. Every large municipality and many of the counties in the state of Michigan should construct tuberculosis sanatoria to be conducted upon a liberal and adequate scale, should build and equip them not for five but for fifty years, and all advanced and open cases of this disease should be

segregated therein and cared for at the expense of the state. This step would have a decided effect in diminishing the spread of the disease, for it would mean the effective isolation of many dangerous centers of tuberculous infection. A widespread and effective campaign of education should be undertaken. These, of course, are only suggestions of a general nature. The details and plans for a campaign for the twentieth century in the state of Michigan should be worked out by a committee of experts. The point which the writer particularly desires to emphasize is that the figures contained in this article justify the early organization and financing of such a campaign under the authority and support of the state and its municipalities. While much good can be and has been accomplished by individual initiative, by public subscription, and by the tuberculosis stamp movement, I fear that they are all inadequate to successfully cope with this big problem without the aid of the state. The financial support for this tremendous battle must not be subject to the variations and uncertainty of private gift and unorganized public subscription. It must have the financial backing and support of the public represented through the state of Michigan and its municipalities.

Another phase of this subject, and one which appeals directly to every life insurance policyholder, is the effect which tuberculosis has upon the cost of insurance. Tuberculosis death claims head the list of payments of practically all old line companies at the present time. And this in spite of the fact that they reject applicants who, after careful medical examination, are found to have tuberculosis or a bad family history with respect to this disease. The fraternal companies are likewise burdened with a heavy mortality from tuberculosis. The official reports of the Modern Woodmen of America show that more than fourteen per-

cent of their total mortality from 1891 to 1907 was due to tuberculosis, and that the 5,156 deaths during that period cost the order \$9,065,000. This drain has induced the society to attempt to reduce the tax by establishing an open-

TABLE X.

SAVING WHICH WOULD BE EFFECTED IN THE ANNUAL PREMIUM ON AN ORDINARY WHOLE LIFE POLICY FOR \$1000 IF TUBERCULOSIS WERE ELIMINATED.

Age.	Annual Premium.	Age.	Annual Premium.	Age.	Annual Premium.
20	\$1.67	35	\$1.66	50	\$1.65
25	1.72	40	1.62	55	1.72
30	1.70	45	1.62	60	1.77

air colony in Colorado for the cure of Woodmen who are afflicted. It is not uncommon in Europe to find sanatoria maintained by insurance companies for the benefit of their policyholders, but I

am not aware of any similar undertaking by any of the large legal reserve companies in this country. Certainly there would seem to be sufficient justification, from a business point of view, for large expenditures in this direction on the part of our giant life companies.

Table X shows the *reduction* which would be effected in annual premiums if tuberculosis were not present. It averages about \$1.75 per thousand of insurance so that every policyholder with a ten-thousand-dollar ordinary whole-life policy is annually contributing from fifteen to twenty dollars of his premium on account of this disease. These losses are computed on a 5 per cent. basis, while most companies operate on a 3 per cent. basis. The difference is offset, however, by the fact that the number of deaths in the company must be somewhat lessened by the selection in risks

TABLE XI.

TABLE SHOWING THE CAPITALIZED OR PRESENT VALUE, COMPOUNDED ANNUALLY AT 5%, OF THE LOSS DUE TO TUBERCULOSIS ON THE MALE POPULATION OF MICHIGAN FOR EACH AGE AND CERTAIN AGE GROUPS BETWEEN AGES 20 AND 60 ON THE BASIS OF

A WEALTH PRODUCING CAPACITY OF \$100 PER ANNUM UNTIL AGE 70.

Age.	Population, 1904.	Loss Rate.	Total Loss.	Age.	Population, 1904.	Loss Rate.	Total Loss.
20	23,442	\$47.51	\$1,113,729	40	19,068	\$29.72	\$ 566,701
21	24,124	47.67	1,149,991	41	12,788	28.60	365,737
22	22,457	47.49	1,066,483	42	17,182	27.48	472,161
23	22,105	47.04	1,039,819	43	15,721	26.40	415,034
24	22,298	46.47	1,036,188	44	15,301	25.29	386,962
20-24	114,426		5,406,210	20-44	480,523		18,814,448
25	21,179	45.81	970,210	45	17,246	24.21	417,526
26	20,646	45.07	930,515	46	13,692	23.13	316,696
27	20,311	44.19	897,543	47	13,473	22.02	296,675
28	22,547	43.22	974,481	48	14,512	20.92	303,591
29	19,260	42.25	813,735	49	12,786	19.84	253,674
20-29	218,369		9,992,694	20-49	552,232		20,402,610
30	22,106	41.21	910,988	50	14,904	18.72	279,003
31	15,761	40.17	633,119	51	9,619	17.62	169,487
32	19,034	39.09	744,039	52	12,962	16.52	214,132
33	17,840	37.98	677,563	53	11,284	15.47	174,563
34	18,551	36.85	683,604	54	11,389	14.34	163,318
20-34	311,661		13,642,007	20-54	612,390		21,403,113
35	19,864	35.70	709,145	55	10,525	13.20	138,930
36	17,746	34.51	612,414	56	10,346	12.06	124,773
37	16,747	33.31	557,843	57	8,671	10.89	94,427
38	18,698	32.09	600,019	58	9,127	9.72	88,714
39	15,747	30.89	486,425	59	8,815	8.59	75,721
				60	10,029	7.51	75,318
20-39	400,463		16,607,853	20-60	669,903		22,000,996



due to the medical examination when the ploicy is issued. But it is interesting to note that in spite of this selection the body of policyholders eventually become exposed to the infection and a large number of them contract and die from the disease after entering the company.

In conclusion, I submit Tables XI and XII showing the detailed losses for the state of Michigan and Wayne County, based on the population according to the state census of 1904. Also Table XIII which shows the annual and total losses for each county in the state. It should be understood that these losses are based on the average tuberculosis death rate

for the entire country. Full credit should be given for the fact that Michigan enjoys a much lower tuberculosis death rate than this general average. This can be done approximately by taking such fractional part of the totals shown in these tables as the ratio of deaths from tuberculosis per 100,000 for the locality in question bears to the corresponding ratio for the United States. When we consider, however, the factors which have been omitted, it appears quite unnecessary to make any allowances, and we may confidently assume the results set forth to be minimum in character.

TABLE XII.

TABLE SHOWING THE CAPITALIZED OR PRESENT VALUE, COMPOUNDED ANNUALLY AT 5%, OF THE LOSS DUE TO TUBERCULOSIS ON THE MALE POPULATION OF WAYNE COUNTY, MICHIGAN, FOR EACH AGE AND CERTAIN AGE GROUPS BETWEEN AGES 20 AND 60 ON

THE BASIS OF A WEALTH PRODUCING CAPACITY OF \$100 PER ANNUM UNTIL AGE 70.

Age.	Population, 1904.	Loss Rate.	Total Loss.	Age.	Population, 1904.	Loss Rate.	Total Loss.
20	3,650	\$47.51	\$ 173,412	40	2,609	\$29.72	\$ 77,539
21	3,661	47.67	174,520	41	2,014	28.60	57,600
22	3,454	47.49	164,030	42	1,805	27.48	49,601
23	3,595	47.04	169,109	43	2,256	26.40	59,558
24	3,401	46.47	158,044	44	2,069	25.29	52,325
20-24	17,761		839,115	20-44	74,688		2,940,364
25	3,303	45.81	151,310	45	1,924	24.21	46,580
26	3,002	45.07	135,300	46	1,687	23.13	39,020
27	3,137	44.19	138,624	47	1,462	22.02	32,193
28	3,439	43.22	148,634	48	1,941	20.92	40,606
29	3,502	42.25	147,960	49	1,693	19.84	33,589
20-29	34,144		1,560,943	20-49	83,395		3,132,352
30	3,514	41.21	144,812	50	1,521	18.72	28,473
31	2,823	40.17	113,400	51	1,183	17.62	20,844
32	3,170	39.09	123,915	52	1,392	16.52	22,996
33	2,916	37.98	110,750	53	1,123	15.47	17,373
34	3,044	36.85	112,171	54	1,007	14.34	14,440
20-34	49,611		2,165,991	20-54	89,621		3,236,478
35	3,234	35.70	115,454	55	1,365	13.20	18,018
36	2,761	34.51	95,282	56	1,153	12.06	13,905
37	2,591	33.31	86,306	57	1,075	10.89	11,707
38	2,884	32.09	92,548	58	1,011	9.72	9,827
39	2,854	30.89	88,160	59	1,184	8.59	10,171
				60	1,106	7.51	8,306
20-39	63,935		2,643,741	20-60	96,515		3,308,412

TABLE XIII.

TABLE SHOWING THE CAPITALIZED OR PRESENT VALUE OF THE TOTAL LOSS, COMPUTED ANNUALLY AT 5%, AND THE EQUIVALENT ANNUAL LOSS, DUE TO TUBERCULOSIS ON THE MALE POPULATION BETWEEN AGES 20 AND 60, FOR EACH COUNTY IN THE STATE OF MICHIGAN, ALL COMPUTED ON

THE BASIS OF A WEALTH PRODUCING CAPACITY OF \$100 PER ANNUM UNTIL AGE 70.

County.	Annual Loss.	Total Loss.	County.	Annual Loss.	Total Loss.
Alcona . . . . .	\$ 2,779	\$ 50,739	Kent . . . . .	\$ 64,958	\$1,185,846
Alger . . . . .	3,546	64,733	Keweenaw . . . . .	2,552	46,589
Allegan . . . . .	18,512	337,947	Lake . . . . .	2,461	44,929
Alpena . . . . .	9,459	172,683	Lapeer . . . . .	12,873	235,011
Antrim . . . . .	7,769	141,833	Leelanau . . . . .	5,385	98,311
Arenac . . . . .	4,940	90,179	Lenawee . . . . .	22,556	411,777
Baraga . . . . .	2,740	50,028	Livingston . . . . .	8,914	162,739
Barry . . . . .	10,394	189,743	Luce . . . . .	2,216	40,456
Bay . . . . .	29,796	543,954	Mackinac . . . . .	4,234	77,304
Benzie . . . . .	5,372	98,074	Macomb . . . . .	15,543	283,751
Berrien . . . . .	23,107	421,840	Manistee . . . . .	12,982	236,993
Branch . . . . .	12,339	225,253	Marquette . . . . .	19,370	353,617
Calhoun . . . . .	24,473	446,778	Mason . . . . .	9,313	170,024
Cass . . . . .	9,515	173,700	Mecosta . . . . .	9,646	176,089
Charlevoix . . . . .	8,076	147,441	Menominee . . . . .	13,172	240,466
Cheboygan . . . . .	8,558	156,233	Midland . . . . .	7,116	129,907
Chippewa . . . . .	10,953	199,959	Missaukee . . . . .	5,171	94,397
Clare . . . . .	4,423	80,743	Monroe . . . . .	15,706	286,733
Clinton . . . . .	11,916	217,561	Montcalm . . . . .	15,944	291,070
Crawford . . . . .	2,007	36,644	Montmorency . . . . .	1,827	33,358
Delta . . . . .	13,982	255,256	Muskegon . . . . .	17,606	321,412
Dickinson . . . . .	9,504	173,497	Newaygo . . . . .	9,002	164,331
Eaton . . . . .	14,440	263,608	Oakland . . . . .	21,464	391,820
Emmet . . . . .	8,731	159,401	Oceana . . . . .	8,638	157,690
Genesee . . . . .	20,046	365,951	Ogemaw . . . . .	4,556	83,182
Gladwin . . . . .	4,261	77,795	Ontonagon . . . . .	3,777	68,951
Gogebic . . . . .	8,802	160,689	Osceola . . . . .	9,099	166,110
Grand Traverse . . . . .	11,108	202,788	Oscoda . . . . .	1,069	19,516
Gratiot . . . . .	14,579	266,149	Otsego . . . . .	3,877	70,781
Hillsdale . . . . .	13,906	253,867	Ottawa . . . . .	20,293	370,457
Houghton . . . . .	35,178	642,214	Presque Isle . . . . .	5,479	100,022
Huron . . . . .	16,896	308,452	Roscommon . . . . .	947	17,297
Ingham . . . . .	21,063	384,519	Saginaw . . . . .	40,409	737,712
Ionia . . . . .	16,350	298,490	St. Clair . . . . .	26,043	475,443
Iosco . . . . .	5,093	92,974	St. Joseph . . . . .	10,683	195,029
Iron . . . . .	4,612	84,199	Sanilac . . . . .	16,895	308,435
Isabella . . . . .	11,594	211,666	Schoolcraft . . . . .	4,646	84,809
Jackson . . . . .	21,859	399,054	Shiawassee . . . . .	15,914	290,528
Kalamazoo . . . . .	23,263	424,687	Tuscola . . . . .	17,216	314,296
Kalkaska . . . . .	3,949	72,086	Van Buren . . . . .	16,463	300,541
			Washtenaw . . . . .	21,606	394,429
			Wayne . . . . .	181,224	3,308,412
			Wexford . . . . .	9,737	177,767

## THE NEEDS OF MICHIGAN IN THE FIGHT AGAINST TUBERCULOSIS.

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Thanks to the far-seeing wisdom of a small group of men who have at different times been associated with the Michigan State Board of Health, our state was one of the first to take up theoretically the campaign against tuberculosis. The compulsory reporting of tuberculous cases was early proposed and fought over in Michigan, and as early as 1895 an act was passed providing for the teaching in the public schools of the knowledge concerning the dangerous communicable diseases. And finally the State Sanatorium at Howell was established. The State Board of Health has been faithful in sending out its bulletins, and its tuberculosis placards posted throughout the state have been of great educational value. Certain towns and cities have passed anti-spitting laws. What other anti-tuberculosis work has been accomplished in the state has been the result of private initiative, either of local anti-tuberculosis societies or of the State Association for the Prevention and Relief of Tuberculosis, and while theoretically early in the field of anti-tuberculosis work the state at the present time is practically far behind twenty other states. In what way I hope to show briefly.

In the first place the people of Michigan are apathetic, they do not realize the importance of the home problem, and this is true because the true significance of the existence of tuberculosis has not been brought home to them, in other words, they have not been educated to a comprehension of the ravages

of this disease and the financial loss thereby entailed. Unless the great body of the people can be made to appreciate the meaning of this disease and the methods of its prevention very little can be accomplished in controlling or exterminating it. The first and most essential feature of the anti-tuberculosis campaign is, therefore, the education of the people concerning the prevention of disease. While the state does this theoretically by the Act of 1895, in which, by the way, tuberculosis is not specifically stated, it is my belief that this law is practically a dead letter. The State Board of Health sends out its teachers' bulletins to the school teachers, a large per cent of these go at once to the waste-basket, and if the letter of the law is occasionally fulfilled by the reading of these bulletins in the schools, it is usually by teachers who have no conception of the significance of what they are reading and the educational results are practically nil. Here and there exceptions are found, and these, I believe, are increasing. In so far as the public schools are concerned more definite and specific tuberculosis literature should be supplied in the form of suitable primers, text-books and illustrated talks. The teacher must himself be instructed, and suitable lectures by men of the medical profession should be incorporated into school work. A dozen other states are ahead of Michigan in laws relating to the specific instruction on tuberculosis in the public schools. In Michigan we should either enforce the Act of 1895



with particular reference to tuberculosis or pass a new one framed particularly to meet the present needs.

Tuberculosis education in the public schools is but a part of the educational campaign that must be pushed at present. In every village, town and city of the state the people who are out of the schools must be brought face to face with the meaning of tuberculosis. This the state is not doing and cannot do at the present. Hence the great need of a State Anti-tuberculosis Association with its local branches. Until the state can take over this work, as I believe it will ultimately do, the State Association with its local branches must be the great educational factor. And herein lies, in our state, a tremendous field of activity. The distribution of literature, the illustrated lecture, the tuberculosis exhibit, the posted placard, the constant presentation before the public of the problem in all of its various phases—all these things constitute a mighty work to be done in the education of Michigan. My own opinion of the function of the state and local associations is that it is pre-eminently educational at the present time. *Education, more education and still more education.* As secretary of the State Association I have been repeatedly asked as to what good the State Association will be to the local branches. The local associations must realize that what is needed now is not the distribution of eggs and milk to the tuberculous poor or the payment of the railroad expenses of some needy tuberculous patient to Colorado or New Mexico or the consumption of all the local financial energy in the provision of a district visiting nurse, but the conservation of all energies and their concentration upon the fundamental necessity of the anti-tuberculosis campaign. The broader aspects of the problem must be first attacked. For instance, the City of Detroit raised about \$12,000 by its tuberculosis tag-day. If

that money is to be wholly spent for the *relief* of Detroit citizens who are now or may soon be infected with tuberculosis, that money will be, to my mind, largely wasted. No mere feeling of sentiment or sentimentality should enter into the disposition of funds collected by local associations. We have before us the vital fundamental problems of the state. These are first of all, the education of the people and the passing of such anti-tuberculosis laws as will permit of local effective attempts to exterminate the disease. Detroit is a very large part of the State of Michigan. What greater good could Detroit do for its citizens than to contribute money to spread the educational propaganda to secure the passage of laws concerning the prevention of tuberculosis and the safe-guarding of the milk supply, to secure additional state sanatoria for advanced cases, etc., that is, to make the greater effort to prevent the development of the disease within the State of Michigan. What Detroit, Kalamazoo, Houghton County or Grand Rapids might thus do with the funds they have collected would be of lasting benefit, not simply to the state, but to themselves.

How are these broader problems to be solved and by whom? The state does not do it, and until the tuberculosis campaign comes under state or federal control the campaign in Michigan, as in other states, must be directed by a State Tuberculosis Association made up of laymen and physicians who appreciate the significance of such a campaign. For five or ten years, perhaps, at least until the people in Michigan are so educated that the state is forced to take up the problem, the State Association must carry on the work. It has been in the field now for one year and is developing slowly—too slowly for a state possessing the educational reputation that Michigan possesses. Thirty local associations have been formed; out of 120 physicians asked

to form local branches only 30 in the year have responded. This indicates a surprising apathy on the part of the physicians of our state. Indeed, my experience as secretary during the year leads me to believe that it is the laymen who are awakening to an appreciation of the significance of tuberculosis. The fact that prevention is possible, and much more certain than cure is gradually filtering into the minds of the population at large, and if the medical profession does not take the lead in these great movements it may expect to see certain things that it has considered peculiarly its own pass out of its hands. Fortunately many physicians do realize this.

The immediate problem is to put the State Association on a sound basis of organization and support. It should have permanent headquarters and a paid secretary or assistant secretary. Already the work devolving upon the secretary is greater than any one who has active professional duties of his own can carry on. During the coming year a local branch should be established in every town in Michigan. In the smaller villages a local committee of five or ten would be sufficient, but in order to carry on the work necessary here in our state a state membership of 5,000 must be obtained. The greatest need in Michigan is, therefore, the completion of the organization of the working body, the State Association. All our efforts should be directed during the coming year to a realization of this.

Of immediately vital interest is the passing of a state tuberculosis law by the present legislature. This the State Association is expecting to bring about. The law proposed is identical with the New York law and is regarded by experts as the best in the country. At the Congress it was given third prize for the reason that it had taken its best features from the state laws of Wiscon-

sin and Maryland, which were given first and second prizes respectively. The people of Michigan may ponder on the greater progressiveness of our sister state, Wisconsin. Michigan has no tuberculosis law, Wisconsin's was given first prize by the International Congress. It is the duty of every physician in Michigan to write to his legislators urging the immediate passage of this law. Until such a law is passed much of our anti-tuberculosis work will be without result.

The great lesson of the Congress was prevention. Segregation of the open tuberculosis case, either in the family or institutional is absolutely necessary if we shall conquer this disease. The open case of tuberculosis, that is, one with sputum containing tubercle bacilli is a menace to the community as a focus of infection. If he is an intelligent individual he may make himself an element of very slight danger, if he is not, he becomes an active and dreaded source of danger to all with whom he comes in contact. And against such a danger society has the right of demanding protection, even by force, if necessary. Out of 1,160 poor tuberculosis families investigated by La Motte only 9 were capable of being adequately careful, 143 were fairly careful, 719 were careless, and 289 were grossly careless. Such a condition exists here in Michigan among the great majority of our tuberculous citizens. They are a constant menace to us and particularly to our children. Against such a danger more radical measures than education must be adopted. We must have greater facilities for segregation. Sanatoria for incipient cases are not in any way so important at this stage as sanatoria for advanced cases. And the State of Michigan does not furnish a single institution of this kind. At Howell only carefully selected incipient cases are taken, the infinitely more important ones, so far as the good of the commun-



ity is concerned, are left to spread the disease. Why save a few at the expense of the many? Personally, I believe that the state should provide sanatorium treatment for the incipient cases among the poor who are unable to give themselves proper treatment; but for the incipient cases among the well-to-do, no sanatorium is needed, they may be treated at home, or if necessary, there should be properly licensed private sanatoria for their accommodation. But the state should supply an adequate number of sanatoria for advanced or open cases occurring among the poor, both for the protection of the public and the good of the patient. Such cases among the well-to-do should be sent to properly licensed sanatoria provided for such cases. This is one of the most crying needs of the state.

As Mrs. Bartlett-Crane has shown the alms-houses of our state are for the greater part foci of infection. Open cases of tuberculosis are herded in many of these without the slightest attention paid to the prevention of the spread of the disease, either among the inmates of the institution or the inhabitants of the community in which the almshouse is located. Such a condition of affairs is a disgrace to our commonwealth. The tuberculous paupers should be gathered together from all counties, and segregated at the expense of the state in some tuberculosis hospital. Such a hospital could be conveniently and economically established in connection with the State Hospital of the University at Ann Arbor. A double good would thus be accomplished, the public would be protected, the patients would be infinitely better off, and the cases could be utilized as clinical material. Scientific study of active cases of tuberculosis was never so important as now, particularly along the line of therapeutics, and the state at the present time does not offer the slightest opportunity in this direction.

The State of Michigan could afford to spend more than a million dollars yearly in the anti-tuberculosis campaign. Five years of such expenditure would see a reduction by half of tuberculosis morbidity and mortality in our state. The statistics of Professor Glover show the minimal cost to the state of the existence of this disease in our midst. These figures may stagger the mind of one brought face to face for the first time with these facts. Against Dr. Glover's estimates not the slightest claim of exaggeration can be advanced. To one who has considered the problem they appear, on the contrary, too small. As he has pointed out they are based only upon a portion of the population, and such factors as increased expense of living, medical treatment, loss to the state from cattle tuberculosis, etc., are not included. Moreover, the cases of tuberculosis reported in Michigan do not represent at all the actual number of deaths in this state due to this disease. Many of the cases reported as pneumonia are in reality cases of tuberculosis. In the State of Maryland the total loss from tuberculosis each year was estimated by the Maryland Tuberculosis Commission to be not less than ten million dollars. York Wilcox estimated the total loss due to tuberculosis in 1907 from all sources to be not less than \$65,000,000. Professor Fisher estimated the total cost of tuberculosis in the United States to exceed \$1,100,000,000 per annum. The money cost of tuberculosis, including capitalized earning power lost by death, exceeds \$8,000 per death. On such a basis the 2,412 deaths from tuberculosis occurring last year in Michigan would represent a financial loss of \$19,296,000. It is very probable that the actual economic loss from all sources annually in Michigan resulting from the presence of tuberculosis is between forty and fifty millions of dollars. The relatively small



loss due to the quarantine resulting from the presence of foot and mouth disease in our state has created a large amount of complaint. Against this greater loss of human life and capital what complaints are the people making? The following quotation from Gov. Hughes, of New York, is to the point here: "If we had through the misfortune of war, or the sudden rise of pestilence, or through some awful calamity, the destruction of life that annually takes place on account of this disease (tuberculosis), we should be appalled, and mass meetings would be held in every community and demand would be made that the most urgent measures should be adopted. It is only because we are accustomed to this waste of life and are prone to think that it is one of the dispensations of Providence that we go on about our business, little thinking of the preventive measures that are possible." Modern medical science teaches us that tuberculosis is no inevitable dispensation of Providence and shows us that the disease is wholly unnecessary and preventable. Surely in the face of such knowledge a state whose people can become more disturbed over the loss resulting from the necessary quarantine due to the presence of foot and mouth disease than over the much more appalling loss due to tuber-

culosis is, indeed, in need of an educational campaign to arouse it to a conception of the proper proportion of things.

In conclusion, the needs of Michigan in so far as the world's fight against tuberculosis is concerned are first: Proper organization and support of the State Tuberculosis Association until the fight against tuberculosis passes into state and federal hands; secondly, the vigorous pushing of an educational campaign to arouse the people from their apathy concerning tuberculosis; thirdly, the immediate passage of a tuberculosis law; fourthly, proper provision for the adequate teaching of hygiene in the public schools; fifthly, the provision of sanatoria for the open cases of tuberculosis; sixthly, the licensing and supervision of private sanatoria for the well-to-do; seventhly, adequate care of the tuberculous cases in the almshouses; eighthly, the protection of the milk supply from tuberculous infection. These things the people of the state must do or fall behind the rest of the civilized world. A vigorous campaign pushed along these lines for the next five years will, I firmly believe, result in a great reduction of cases of tuberculosis in this state and save to the commonwealth millions of dollars.

Malignancy of stomach trouble is not suspected often enough, particularly by the general practitioner. In cases with indefinite symptoms of dyspepsia apparently without reason, and with progressive tendencies we should not be too ready with the diagnosis of "chronic gastritis" or "nervous dyspepsia" but should bear in mind the possibility of an incipient cancer.

We suspect under these circumstances malignancy in patients between 40 and 70, but do not forget that it occurs not so seldom before 30. If we suspect cancer we should carry out those ex-

aminations which are of established value, some of them repeatedly in order to reach an early diagnosis; special attention given to active peristalsis, to the microscopical findings on fasting stomach, to the gradual disappearance of hydrochloric acid, and appearance of lactic acid, also the Salomon-test. We should never omit to search for occult blood in the stool after meat-free diet. If within 4 weeks the cancer cannot be excluded and symptoms continue on their progressive line, probatory laparotomy should be urged. An early diagnosis means radical operability.—Kast, *Am. Med.*, Dec., '08.

## The Journal of the Michigan State Medical Society

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to B. R. Schenck, M. D., Editor, 502 Washington Arcade, Detroit, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions or communications.

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**Subscription Price, \$2.00 per year, in Advance.**

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FEBRUARY

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### Editorial

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**The Plan for Medical Defense**, which has been worked out by the Committee, appointed at Manistee and of which Dr. F. B. Tibbals, of Detroit, is chairman, was submitted to the Council at the January meeting, and after thorough discussion was unanimously adopted. The plan necessitates a number of amendments to the by-laws; these amendments were recommended by the Council for consideration by the House of Delegates. Before the matter comes up at the next annual meeting, every County Society will have ample opportunity to study the details and instruct the delegates.

In brief the plan provides:

- (1) An initial assessment of \$1.50 from each member for the year 1910.
- (2) One dollar per year thereafter.
- (3) A Standing Committee on Medical Defense, consisting of an Executive Board of five and one member from each component county society, not otherwise represented. The Executive Board shall be elected for five years; the other members for one year.
- (4) The Executive Board and other members of the Committee are all to be elected by the Council.
- (5) The Chairman of the Executive Board, also elected by the Council, for

one year, is to be the custodian of the Defense Fund and to give bond to the Council. He is also to receive some compensation set by the Council.

(6) The Executive Board will engage, by the year, a competent firm of attorneys. Their duties shall be to defend any member not in arrears, when sued or threatened with suit for civil malpractice.

(7) Dues must be paid before June 1st, the league not defending any member in a suit, the cause of which arose while in arrears.

(8) It is to be especially noted that the league assumes two years' back liability on every member, provided suit has not been threatened or begun before joining the society or before the league is established. It also assumes the defense of any suit brought against the estate of a deceased member.

These proposed amendments should be carefully read by every member. They are as follows:

Chap. VII., Sec. 3, third line, after "funds," insert "except the Defense Fund."

Chap. VIII, Sec. 6, line 27, amend to read: "It shall be the further duty of the Council to hold the official bond of the Treasurer and the Chairman of the Executive Board of the Committee on Medical Defense for the faithful execution of their offices, annually to audit and authenticate their accounts," etc.

Chap. VIII, Sec. 6, last sentence, after "Treasurer" insert "or the Chairman of the Committee on Medical Defense."

Chap. IX, Sec. 1, add "A Committee on Medical Defense."

Chap. IX, add as subsequent sections.

Sec. 6. The Committee on Medical Defense shall consist of an Executive Board of five and also one member from each component society not otherwise represented, all to be elected by the Council. The Executive Board, three of whom shall be from Wayne County, shall be elected for one, two, three, four and five years respectively, and thereafter one member shall be

elected each year, to hold office for five years. All other members of the Committee to be elected for one year.

The election of members of the Board and Committee shall be made by the Council at the time of the Annual Session of the Society and shall go into effect on the first day of the following January.

Sec. 7. The Council, at the same meeting, shall elect one of the five members of the Executive Board as Chairman, whose term of office shall be for one year from the first of January following. He shall act as Chairman of the Executive Board and of the entire Committee, and shall be the custodian of the Defense Fund. No disbursement shall be made from the Defense Fund without the signatures of the Chairman of the Executive Board and the Secretary of the State Society. Money can be drawn from the Defense Fund only by an order of the Council signed by the Chairman and the Secretary thereof.

In order that the Chairman may be able to give the requisite amount of time to his duties, it is desirable that he should receive some compensation. The amount of his salary shall be fixed by the council.

Sec. 8. The Executive Board shall report to the Council at its annual meeting, giving full details of the work of the committee, and a detached statement of income and disbursements.

It shall engage by the year a competent firm as general attorneys and fix their compensation. Their duties shall be to defend any member of the society not in arrears, when sued or threatened with suit for civil malpractice, or to supervise such defense through a local attorney.

Sec. 9. The defense fund, consisting of an initial assessment of one and one-half dollars from each present and future member of the society, and a subsequent assessment of one dollar for each year after the first, shall be collected by the state secretary, through the county secretaries, and paid at least monthly as collected to the chairman of the defense committee.

Sec. 10. Members in arrears after June 1st shall not be entitled to defense for any suit, the cause of action of which arose while in arrears, and any member sued or threatened before joining the Society or before the organization of this Defense Fund must pay the actual cost of defense in such suit.

(In the event, however, of the Wayne County Defense League turning over its fund, said fund

being larger than the per capita initial assessment of the Wayne County Medical Society, the Defense Committee will assume the defense of any actions pending in Wayne County.)

Sec. 11. With the exceptions above noted the Defense Committee shall undertake the defense of any member of the Society sued or threatened with suit for civil malpractice, regardless of the time when the alleged cause of action arose, and shall also defend any action for civil malpractice against the estate of a deceased member, provided he or she while living has conformed to the foregoing requirements.

Sec. 12. In the event that during any one year the demands upon the Defense Fund be large enough to exhaust it, the Council shall be authorized to loan sufficient funds from the treasury of the State Society to meet the contingency.

Sec. 13. It shall be the duty of any member of the Society threatened with action for civil malpractice to confer at once with the member of the Defense Committee from his component Society and with his aid prepare the case and forward the same to the chairman of the Defense Committee. He must agree not to settle or compromise his case without the consent of the Executive Board and the General Attorneys. He may recommend, in conjunction with the local member of the Defense Committee the best available local attorney, but the authority to engage the services of local attorneys shall lie with the Executive Board and their General Attorneys. The local attorney chosen shall enter the appearance of his client and undertake his defense under the supervision of the General Attorneys.

Sec. 14. All attorneys' fees and court costs will be paid from the Defense Fund, and defense carried through all Michigan courts, but under no circumstances shall this fund be liable for any damages declared against an unsuccessful litigant.

It is designed by means of this Defense Fund to furnish a fighting defense against the usually unjust menace of civil malpractice by providing attorneys especially competent in this line of work, and paying all expenses incident thereto.

Each issue of the Journal, until the annual meeting, will contain information on the subject. It is the desire of the Council that every member shall fully understand the plan, and before it comes up for adoption, a referendum



vote by mail will be taken, in order that the sentiment of all the members may be learned. The chairman of the Committee will gladly answer any questions which may come up, either by personal letter or through the columns of the Journal.



**Co-operation of Family Physician and Ophthalmologist.**—In co-operation, two or more persons work together for a single purpose. Since this calls for a common knowledge not possessed by the family physician and ophthalmologist, they cannot co-operate. The average family doctor frankly says that he knows nothing of eye diseases, but refers such cases as he recognizes to either the optician or ophthalmologist, if they be available. His unrecognized cases must suffer the natural effects of his ignorance, be it local or general distress, temporary or permanent loss of vision. Some drift towards persons having a layman reputation for treating disabled eyes, without reference to qualifications. The ophthalmologist can do nothing to reach either of the classes, other than permit the attractive power of his reputation among the laity, to have its natural course; thus (broadly speaking) no co-operation between family physician and ophthalmologist now exists, because the former lacks the knowledge imperative therefor.

To start the machinery of professional education operating towards equipping the family physician with this knowledge, resolutions were adopted by the last meeting of the Michigan State Medical Society. These directed the Council to take the matter up with their county societies, if perchance some doctor might see and embrace his opportunity to broaden his field of practice, and increase his income. It was also instructed to confer with the State Board of Registration, as to making its exam-

inations more definite as to subjects and amounts of the same, so that the candidates could master and practically apply them in practice.

Commenting on these resolutions, the *Optical Journal* says, "the attempt to educate physicians to co-operate with oculists will prove a dismal failure." It further remarks that the medical profession lost a golden opportunity, in failing to establish such co-operation while it had a chance. The last remark is an historic fact; the first remains to be proved.

Co-operation necessarily follows the perception, by both parties, of a common advantage in such co-operation. It needs little astuteness for family physician and ophthalmologist to see that their co-operation would give them the practice now in the hands of laymen. The money value of this runs into the hundreds of thousands of dollars, which the profession needs and by co-operation can secure.

The standing of the profession with its clients will become more solid as laymen are displaced by educated physicians; this standing is a valuable asset, and the securing of it an incentive to co-operation. Finally it is *right* that educated physicians should care for all disabled eyes.

Is it urged that family physicians are inadequate to the mastery of the practice now in the hands of opticians; this is absurd, as the educated can surpass the uneducated in both the acquisition of needed knowledge and pleasing the people. Besides, family physicians are already practicing "limited ophthalmology," because then they will have friends at "court," able to pick up all eye cases at their beginnings, treat the simple ones and refer the complex to the specialist; thus all eye patients will have the service of educated physicians—family physicians co-operating with ophthalmologists.

The thing to be done, now, is to

assure the family physician that he can master and practice "limited ophthalmology" with success, and encourage him to make a beginning at once.



**New York's Tuberculosis Law.** The act defining the powers and duties of the health officers which was passed by the New York Legislature last session, has been pronounced by experts as the best one yet drafted, although, in the recent contest, Wisconsin received first prize and Maryland second. The New York Law received honorable mention because it had taken its best points from the two states mentioned, the judges holding that it was right to give credit to the two states originating the excellent features of the act.

The Legislative Committee of the *Michigan State Association for the Prevention and Relief of Tuberculosis* will attempt to have passed, in this state, a law, whose provisions will be largely based on the New York act. This act has many excellent features and is to be heartily commended. Its passage will aid greatly in the campaign which the Society is pushing, with the aim of reducing the number of cases of tuberculosis in the state and finally stamping it out altogether.

The essential provisions of the New York Law are as follows:

1. Tuberculosis is declared an infectious and communicable disease. It shall be the duty of every physician to report, in writing, every case, within 24 hours after a diagnosis is made. Report to be made to the health officer of city, town or village. Every tuberculous patient in a hospital must be reported.

2. Every health officer, when requested, must make or cause to be made a microscopic examination of sputum forwarded to him. He must report the result of the examination to the physician in charge of the patient. This is to be done free of charge.

3. Every health officer must keep records in a

register, of patients having tuberculosis. This register shall not be open to the public for inspection.

4. When apartments recently occupied by a tuberculosis patient are vacated, the physician or (if there be no physician) the owner must notify the health officer, and not allow the apartments to be again occupied until they are disinfected.

5. The health officer is required to disinfect such premises. If he determines that premises need thorough cleaning and renovating, he shall serve notice on the owner to do so.

6. If such renovating is not begun within 48 hours, the health officer may placard the premises as follows:

"Tuberculosis is a communicable disease. These apartments have been occupied by a consumptive and may be infected. They must not be occupied until the order of the health officer directing their disinfection or renovation has been complied with. This notice must not be removed under the penalty of the law except by the health officer or other duly authorized official."

7. Patients may be compelled by the health officer to dispose of sputum or other secretions in an approved manner.

8. It shall be the duty of a physician attending a patient having tuberculosis to take all proper precautions and to give proper instructions to provide for the safety of all individuals occupying the same house or apartment, and if no physician be attending such patient this duty shall devolve upon the local health officer, and all duties imposed upon physicians by any sections of this act shall be performed by the local health officer in all cases of tuberculosis not attended by a physician, or when the physician fails to perform the duties herein specified, and shall so report.

9. Physicians must report, on special blanks, what precautions have been taken. When such report is satisfactory, the health officer shall issue a warrant for \$1.00, payable to the physician.

10. The penalty for failure to report shall be a fine of not less than \$5.00 nor more than \$50.00.

11. Recoveries must be reported.



The study of medical biography is a pleasant and profitable means of employing leisure time. Not every man,

in fact few, is located near large libraries where first hand material may be obtained, yet quite a respectable little library of medical biography can be accumulated at very moderate cost. Books, like Walsh's "Catholic Churchmen in Science," Thorpe's "Life of William Pepper," Osler's "Alabama Student," Putnam's "Life of James Jackson," or Kelly's "Walter Reed and Yellow Fever" are well worth reading and having at hand where they may be picked up and reread from time to time. Many other similar volumes are obtainable.

There is a certain inspiration which comes from the perusal of the achievements and the trials of those who fought the battles which most of us are fighting. The insight into the lives of such men as Bartlett, Beaumont or Reed gained from their biographies, together with the knowledge of the medical affairs of their times acquired from such books, has a very distinct broadening influence and adds much to the interest of our daily work. An occasional paper along the line of medical history or biography would be a pleasing addition to the program of many of the county societies for there are men in every county society who can write a biographical paper and write it well.



**September fifteenth and sixteenth** are the dates set for the next annual meeting of the State Society. Kalamazoo is the place. We should have the largest attendance since the Detroit meeting of 1903. Plan now to arrange your affairs so that you may attend.



**June eighth to eleventh** are the dates and Atlantic City the place, of the 1909 meeting of the American Medical Association.

## Book Notices

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**William Pepper, M. D., LL. D.**, Provost of the University of Pennsylvania. By Francis Newton Thorpe. 6½x9½ in., 552 pages, illustrated; cloth, \$3.50 net. The J. B. Lippincott Company, Philadelphia, 1904.

Writing the life of Pepper was evidently a congenial task to his biographer, for the completed work rings with a true appreciation of this great man. Professor Thorpe was associated with Pepper for thirteen years, during which time the former was fellow and professor of history at the university. The material from which the biography is compiled consisted of a mass of letters—for Dr. Pepper was a voluminous letter writer, the personal knowledge of the author and the files of the contemporaneous newspapers. The record extends through nearly forty years, during the last twenty-five of which Pepper was the most conspicuous figure in the intellectual and philanthropic life of Philadelphia.

The work is divided into three parts: 1. The Physician and Medical Writer; 2. The Educator; 3. The Citizen. It is illumined by eleven excellent illustrations.

As Rich has said in his article in this issue of the JOURNAL, it seems hardly believable that any one man could have accomplished so much in one short lifetime. Not only was Pepper pre-eminently great as a physician and teacher, but he was also possessed of rare executive ability, making him a leader in and an organizer of every project to which he turned his attention. His organization of the University Hospital, his work as medical director of the Centennial Exposition, his achievements as a physician and writer, and the organization of the Pepper Clinical Laboratory are discussed in the first section.

Part II is devoted to a recital of the marvelous growth of the University of Pennsylvania from 1862 until 1894—a history unique in university annals, if exception be made of two instances where great schools have sprung up as the result of very large endowments. Had there been no Pepper, it is almost safe to say that the University of Pennsylvania would be today what it was at the time of the war, a great medical school with other departments of merely local reputation.

The history of the Free Library of Philadelphia, of the University extension movement, of the Museum of Science and Art, and of the Industrial Museums, in all of which Dr. Pepper was



the leader is related in Part III. An interesting chapter, especially to all those who knew Dr. Pepper, is the one on "Incidents and Characteristics."

The book is a valuable one from the viewpoint of American History of Medicine, as well as from the history of education. The lesson to be learned from Dr. Pepper's life—that of constant application and industry, is well set forth. Altogether it is a delightful book for the physician's library.

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**An Alabama Student and Other Biographical Essays.** By William Osler, M. D., F. R. S., Regius Professor of Medicine in Oxford University. Octavo, 335 pages; illustrated. Oxford University Press, American Branch, 29-35 West 32nd St., New York, 1908.

Osler has always held that not only is the study of the lives of distinguished medical men an inspiring recreation, but also, that it possesses, as well, much educational value. Few medical men are gifted, as is Osler, with the genius to pick out the essentials in the life of a notable, and draw therefrom those lessons which are helpful to others. He has this ability to a marked degree and the result is that one cannot fail to catch a bit of the enthusiasm which dominated all the subjects of his biographical essays. In this book, he has collected a series of thirteen essays, for the most part published before.

The "Alabama Student" was Dr. John V. Bassett, of Huntsville, who in 1836, visited Paris, saw much of the work of Andral, Velpeau, and Broussais, and wrote interesting letters concerning them. "Thomas Dover," of Dover's powder fame, is the subject of the second essay. It is not generally known that Dover was a buccaneer and the man who rescued Alexander Selkirk, the original of "Robinson Crusoe." "John Keats, the Apothecary Poet," is one of Osler's masterpieces. It forms the third essay. Oliver Wendell Holmes, whom Osler knew well, is paid a touching tribute, in the fourth essay; the author says that he occupies a niche in his affections with Charles Lamb and Oliver Goldsmith. A large part of the essay deals with Holmes' controversy with Thomas and Meigs over the contagiousness of puerperal fever. "John Locke, the Philosopher-Physician," the friend of Sydenham, is a somewhat less interesting paper.

Elisha Bartlett and his book on fevers are too little known and appreciated by the profession; the man was a keen observer and a writer of power, the book a valuable one even at the present day. Of particular interest to Michigan

readers is the next essay on "A Backwood Physiologist" portraying the life and the work of William Beaumont.

Osler has always been an ardent admirer of Louis, and keenly appreciative of the influence which that master had on American medicine. The article on this subject is most interesting.

"William Pepper" contains some things which are new and read in connection with Rich's appreciation of Pepper in this issue of the JOURNAL and with Thorpe's Life of Pepper, it is particularly interesting. Another essay which will be read with pleasure by all Pennsylvania graduates is that on "Alfred Stillé." Osler's essay on Sir Thomas Browne, the next in order, is well known. "Fracastorius" and "William Harvey" complete the volume. The latter was the Harveian Oration, delivered at the Royal College of Physicians, London, in 1906. At the time, the *Lancet* remarked that the amount of new material in the essay was wonderful, considering the amount of literature existing on the subject.

The book is most attractively bound in red cloth. The English book paper is excellent, and there are a number of splendid portraits.

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**Surgery: Its Principles and Practice.** In five volumes. By 66 eminent surgeons. Edited by W. W. Keen, M. D., LL. D., Hon. F. R. C. S., Eng. and Edin., Emeritus Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Phila. Volume IV. Octavo of 1194 pages, with 562 text-illustrations and 9 colored plates. Philadelphia, W. B. Saunders Company, 1908. Volume: Cloth, \$7.00 net.

Each succeeding volume of this system is a delight to the recipient, for thus far he has not been disappointed in his expectations. The list of contributors given in the prospectus promised a noteworthy work, and it is gratifying to see that the promise has been fulfilled.

This volume contains: "Hernia," by Coley; "Surgery of Rectum and Anus," by Abbe; "Genito-Urinary Surgery," by Edsall, Ransohoff, Lewis, Cabot, Young, Horwitz and Bevan; "Surgery of the Intestine," by Van Hook and Kanaval; "Appendix," by Murphy; "Surgery of the Ear," by Dench; "Surgery of the Eye," by De Schweinitz; "Military Surgery," by O'Reilly; "Naval Surgery," by Rixey; "Tropical Surgery," by McCaw, and "The Influence of Age, Race and Sex in Surgical Affections," by Rodman.

Our space forbids a review of all these chapters, but the above list will demonstrate that many of them are contributed by men whose

names have been associated with the special subjects. The teaching here found may be depended upon as the latest.

There are three more volumes to appear.

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**Surgery.** By John Allan Wyeth, M. D., LL. D., Professor of Surgery in the New York Polyclinic Medical School. Octavo, 816 pages, 864 illustrations. Marion Sims Wyeth and Co., Publishers, New York, 1908. \$6.00, prepaid.

Many readers will recall Wyeth's "Text-Book on Surgery" which appeared in 1887, and which subsequently went through three editions. The last appeared in 1900. Later Wyeth acquired the rights from the publishers and has now prepared an entirely new work. Many new illustrations have been added, a number of them in colors. All are well chosen.

The book is particularly rich in minor surgery, although the technic of major operations is sufficiently comprehensive for ready consultation. Less important matter is discussed in foot notes of smaller print.

The work is one of the best of the single volume surgeries. Paper, press work and binding are good.

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**A Text-book of Physiology.** For Students and Practitioners. By George V. N. Dearborn, A. M., (Harvard), Ph. D., M. D. (Columbia), Professor of Physiology in Tufts College. Medical and Dental Schools, Boston. Octavo, 550 pages, with 300 engravings and 8 colored plates. Cloth, \$3.75 net. Lea & Febiger, Publishers, Philadelphia and New York, 1908.

This new treatise on physiology is designed especially "for medical and dental practitioners and students." It claims originality in being the first book of the kind to recognize the more and more insistent demands of the mental process." These statements in the author's preface appear to be borne out by the text, which includes the usual subject matter of physiology, with a little more than the usual sidelights of comparative zoology. The author's treatment of the subject is interesting, and in some ways unique; in style he is a trifle verbose, at times quite conversational, he occasionally quotes poetry, and his pages are not without touches of humor. These facts do not detract from the evident seriousness of the writer and his qualifications for imparting knowledge; indeed, they may augment the appeal of the book to a certain class of readers. It is a compend of useful and correct information, served in readable form; it is not a tome of vast and ultimate knowledge, nor likely to be sought

as a work of reference. A good series of experiments is outlined, and a list of subjects for student essays and conferences, and the usual tables.

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**The Ready-Reference Handbook of Diseases of the Skin.** By George Thomas Jackson, M. D., Chief of Clinic and Instructor in Dermatology, College of Physicians and Surgeons, New York. Sixth edition. 12mo., 737 pages, with 99 engravings and 4 plates, in colors, and monochrome. Cloth, \$3.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1908.

Since the previous edition of this book, the author has been elected to the chair of dermatology in the College of Physicians and Surgeons, New York. His long experience as a teacher makes him familiar with the needs of students, and assures that his work will be both concise and complete. Indeed, conciseness is the main characteristic of his book. The "Ready Reference" feature is the arrangement of skin diseases in alphabetical order. For diagnostic purposes, there is a complete epitome of symptoms and signs.

Treatment is afforded ample space, and many tried formulas are given.

It is a most useful book to have at hand for consultation.

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**Therapeutics: Its Principles and Practice.** By Horatio C. Wood, M. D., LL. D., University of Pennsylvania. Thoroughly revised and rewritten by H. C. Wood, Jr., M. D., University of Pennsylvania. Cloth, \$5.00, net. Philadelphia, J. B. Lippincott & Co., 1908.

Wood's Therapeutics has, for thirty years, been the student's vade mecum. It has passed through fourteen large editions and is probably to be found on the book shelves of more physicians than any other one book, unless it be Gray's Anatomy.

The alterations in this edition are more extensive than in any previous edition for many years. An effort has been made, and we think successfully, to make the book more useful for the student, without lessening its value as a book of reference. This has been accomplished by printing the fundamentals in large type, while more intricate details are printed in smaller type.

Articles on the opsonic and the ion theory have been added, every page revised to correspond to latest knowledge, and some of the chapters have been entirely rewritten. The most extensive changes will be observed in the section on cathartics and diuretics.

Long may this good old book live.



**A Treatise on the Principles and Practice of Gynecology.** By E. C. Dudley, A. M., M. D., Professor of Gynecology in the Northwestern University Medical School, Chicago. Fifth edition, thoroughly revised. Octavo, 806 pages, with 431 illustrations, of which 75 are in colors, and 20 full-page colored plates. Cloth \$5.00, net. Lea & Febiger, Philadelphia and New York, 1908.

Since its first appearance, Dudley's Gynecology has been recognized as one of the best in its field. This new edition is much more than a reprint of the fourth edition, for it has been thoroughly revised. A new introduction and a new chapter on "Incontinence of Urine" have been added. There are also 40 new illustrations, making in all, 431, many of which are in color, and all of which are good.

As in previous editions, the arrangement of the text is somewhat different than in the usual text book. The ordinary mode followed is to treat the diseases of any one organ, as for example the uterus, together. Dudley has arranged diseases according to the pathological and etiological sequence, making the picture—as in gonorrheal infection—complete. This we believe is a distinct advantage.

It is the best edition yet of a very strong book.

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**Adenomyoma of the Uterus.** By Thomas S. Cullen, M. B., Associate Professor of Gynecology in Johns Hopkins University. Large octavo of 270 pages, with illustrations by Herman Becker and August Horn. Philadelphia and London: W. B. Saunders Company, 1908. Cloth, \$5.00, net.

Cullen was one of the first pathologists to recognize that adenomyoma is a distinct form of tumor, and that it produces more or less constant clinical signs. His first case was studied in 1894, and published in 1896. Since that time he has carefully examined 1,283 fibroids and discovered 73 instances of adenomyoma—5.7 per cent. These 73 cases form the basis of this monograph.

Clinically the cases are divided into three classes: (1) Adenomyomata, the uterus preserving a relatively normal contour; (2) Subperitoneal or intraligamentary adenomyomata; (3) Submucous adenomyomata. Cases are reported in detail and both the gross and the microscopic appearances illustrated by 68 as fine drawings as have ever graced a monograph. They have been faithfully reproduced in a brown tint, giving the appearance of a sepia finish. The paper, press work and binding are all that can be desired.

The book is a distinct addition to gynecological literature and will long remain a classic.

**Diseases of the Nervous System,** for the General Practitioner and Student, by Alfred Gordon, A. M., M. D. (Paris), Associate in Nervous and Mental Diseases, Jefferson Medical College. 437 pages, with 136 illustrations. Philadelphia, P. Blakiston's Son & Co., 1908.

The size of this volume will commend it to the student who is not seldom discouraged by ponderous tomes upon a subject usually regarded as dry and lacking in interest.

The text is plain and practical, going less into detail than the larger text-books, yet tersely stating what is essential and avoiding debatable points.

Pathology, symptomatology, and differential diagnosis are carefully and briefly emphasized as well as course, termination, prognosis, etiology and treatment.

Careful chapters on anatomy and physiology and methods of examination precede the other text.

This book ought to be distinctly helpful to the student and the practitioner who wish to get quickly and clearly at the meat of the subject of nervous diseases.

The print is clear and illustrations numerous; many of them very good.

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**Progressive Medicine;** Vols. III. and IV., September and December, 1908. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, 285 pages, with 30 engravings. Per annum, in four cloth-bound volumes, \$9.00; in paper binding, \$6.00, carriage paid to any address. Lea & Febiger, Publishers, Philadelphia and New York.

Most of the advances in medicine are of course first announced in periodicals as the quickest means of publicity. Many of them are lost to the man who does not read a half-dozen languages, and this vital knowledge would moreover be limited to very small circles were it not for the existence of mediums for universal diffusion. Progressive Medicine is one of the best of these mediums. The material selected is wisely chosen and the men who edit the various departments are authorities of recognized standing. In it the practitioner will find material which, if carefully read, will bring his knowledge to date.

The September issue contains four departments: Diseases of the Thorax and its Viscera, by Ewart; Dermatology and Syphilis, by Gottlieb; Obstetrics, by Davis; and Nervous Diseases, by Spiller.

The December issue contains much of practical interest. Edsall, in his section on the Diseases



of the Digestive System, points out the clinical bearings of recent physiological researches on the stomach and of psychic influences on digestion, deals with the results of recent X-ray advances in connection with that organ, devotes 10 pages to Gastric Ulcer, Stenosis and Carcinoma, revises to date the recently developed subject of intestinal diverticula, and illuminates the hitherto obscure field of diseases of the pancreas. In the same most cursory manner we may refer to the articles on Renal Tuberculosis and Syphilitic Nephritis in the section on the kidneys, written by Dr. John Rose Bradford, of London. Blood-good, of Baltimore, has covered in a hundred pages, the real additions to practical surgery during the year. His remarks on Surgical Shock deal instructively with a common and serious condition. He devotes twenty-five pages to advances in Surgery of the Blood-vessels, a subject of especial interest at the present time, and the same may be said of his articles on Surgery of the Joints. He closes with twenty pages on Tumors, thus completing in connection with his former sections on these morbid growths, one of the most important monograph on the subject in the language. Belfield, of Chicago, covers the latest advances in the Genito-Urinary field authoritatively in thirty pages. The assistant editor, Dr. Landis, closes the year with a Practical Therapeutic Referendum, reviewing the advances in both medicinal and non-medicinal treatment, and giving due prominence to untoward results following serum therapy.

ANNUAL MEETING OF THE COUNCIL

The Council of the State Society met in Detroit on January 7th, and was attended by President Lawbaugh and eleven of the twelve councillors. The one vacant chair was on account of illness. Reports were received from the secretary and the treasurer, showing the paid membership for 1908 to be 1,883, and a balance in the treasury of \$2,847. The details of these reports will be furnished the house of delegates and published in the official minutes of that body.

Dr. W. H. Sawyer, chairman of the Committee on Legislation and Public Policy, reviewed the legislation which it is expected will come up this winter. The possibilities are a Nurses' Registration Act, an Optometry Bill, an amendment to the Osteopathic Bill and an act restricting the use of

the term "Certified Milk." The society, as such, has no bills to be presented this year.

The afternoon session of the Council was largely taken up with a consideration of the plan for medical defense, submitted by the committee, of which Dr. F. B. Tibbals is chairman.

This committee had drafted a rough sketch of the plan and submitted it to the county societies for tentative action. Thirty-three counties were heard from, 32 voting in favor of the plan, and one not voting. The original plan was to have an assessment of \$3.00 for 1910 and \$1.00 per year thereafter. It was the unanimous opinion of the Council that medical defense is the most important new work undertaken by the State Society in some years. There was much difference of opinion as to whether our membership would suffer on account of the \$3.00 initial assessment, and it was finally decided to recommend to the house of delegates certain amendments to the by-laws, providing for an initial assessment of \$1.50 and \$1.00 per year thereafter. (The details of the plan will be found elsewhere in this issue of the Journal.)

Dr. George W. Moran was re-elected treasurer and Dr. B. R. Schenck, secretary.

County Society News

Fifth Councilor District.

For the first time in its history the Fifth District Society met this year outside of Grand Rapids. On the invitation of the Ionia County Society the meeting was held at Belding, on January 14th. The physicians of Belding acted as hosts, and the members of the Montcalm County Society were guests of honor.

The following invitation was sent to all of the members in the district:

Ionia, Jan. 5, 1909.

*My Dear Doctor:*

Now is the winter of a doctor's life made glorious summer by the annual meeting of the fifth councillor district. You have promised yourself a vacation—take it now. Look up the time-table and go to Belding the night before, so as to be present at the opening. The fifth district expects every member to do his duty. The Montcalm County Medical Society have generously

postponed their regular meeting falling on this date, in order to be with us to make this a great day for the glory and honor of medicine in western Michigan. On the enclosed card indicate your intention to be at the meeting, and get it to the postoffice at once, as the entertainment committee wish to know how many to provide for. The banquet will be served at the famous hostelry, the Hotel Belding, and will be of the best, at a cost of \$1.25 per plate. In addition to the good things on the menu card there will be some surprises.

"An' the toastmaster 'ell git you  
Ef you don't watch out."

In addition to program and banquet, a visit to the silk mills is planned. The silk industry at Belding is a wonderful thing. More silk is manufactured here than at any other place west of the Allegheny mountains. The factories are marvels of sanitary and hygienic perfection.

Come, doctor, and go with us,

Yours for a good meeting,

C. S. COPE, Sec'y,

633 W. Main St. Ionia Co. Med. Society.

As self reliance makes a strong medical society, all the papers were by members of the district. The program, which began at 8:30 a. m., lasted until 1 p. m., and was as follows:

Presiding Officer—Dr. Ralph Spencer, Councilor.

Paper—Dr. Jas. E. Ferguson, Belding. A Plea for the Systematic Medical Examination of all School Children with Special Attention to Diseases of the Respiratory Tract.

Discussion—Dr. R. Apted, Grand Rapids.

Paper—Dr. Collins H. Johnston, Grand Rapids. "Symptoms and Diagnosis of Pulmonary Tuberculosis."

Discussion—Dr. G. W. Lowry, Hastings.

Paper—Dr. George Winchell, Ionia. "Common Sense in Medicine."

Discussion—Dr. F. G. Sheffield, Hastings.

Paper—Dr. W. H. Belknap, Greenville, "Surgery of the Thyroid Gland."

Discussion—Dr. E. D. Kremers, Holland.

Paper—Dr. Richard R. Smith, Grand Rapids. "The Diagnosis of Chronic Appendicitis."

Discussion—Dr. S. C. Graves, Grand Rapids.

Dr. R. J. Walker—Saugatuck, Mich. "Two Cases of Tri-facial Neuralgia Treated by Alcohol Injections."

Discussion—Dr. A. J. Bower, Greenville.

Dr. D. G. Cook—Holland. "A Case of Spontaneous Rupture of the Stomach. Autopsy."

Discussion—Dr. C. C. Dellenbaugh, Portland.

The *Ionia Standard*, of January 17th, gives the following account of the meeting: Belding on Thursday witnessed the largest concourse of medical men ever assembled in Ionia county. Representative physicians were present from Ionia, Kent, Barry and Ottawa counties of the fifth district, and from Montcalm of the eleventh. The scientific program was full and complete, the session lasting from 8:30 a. m. to 1 p. m. Every paper on program was read by its author and the discussions that followed were filled with "pith and point."

At 1:30 the banquet hall was thrown open. The invocation was by Rev. Jas. A. Boynton of the Episcopal clergy, himself a son and grandson of English physicians, and too, a student of medicine in earlier life.

At the banquet the following toasts were given:

Dr. F. R. Blanchard, "The Doctor's Compensation;" Dr. Ralph Spencer, "The Doctor;" Dr. O. R. Long, "A United Profession;" Dr. A. T. Booth, "The Specialist;" Dr. R. B. Corbus, "Nerve and the Nerves;" Dr. J. J. Mersen, "The Medicine Man as a Moral Force;" Dr. F. C. Warnshuis, "The County Society and the Doctor."

The music furnished during the banquet was by the famous Silk City orchestra, composed entirely of ladies.

The toastmaster, Dr. R. W. Alton, of Portland, presided with fun-provoking gravity. After the banquet there was a visit to the silk mills, which we were pleased and astonished to learn were the largest of their kind in the world; one and a quarter million yards of silk fabrics in addition to thread and braid was last year's output. This is a Michigan industry that Michigan people know little of.

An unfortunate derailment on the P. M. Ry. prevented the larger part of the Montcalm delegation from reaching the meeting.

One plucky Grand Rapids doctor missing the early train started for Belding via G. R. & I. and P. M. through Howard City. When his train was stopped by the derailed freight he skipped out, walked over two miles to Greenville, hired a livery and drove in in time for the banquet, hungry and almost frozen, but happy to be in.

C. S. COPE,

Secretary Ionia County Medical Society.

**Bay.**

At the annual meeting, held December 14, 1908, the members of the society were the guests of the retiring president, Dr. T. A. Baird, at his residence. A sumptuous banquet was served, followed by routine business and the election of officers for the ensuing year 1909. Officers are as follows: President, Dr. W. R. Ballard, Bay City; Vice-President, Dr. R. C. Perkins, Bay City; Secretary, Dr. H. N. Bradley, Bay City; Treasurer, Dr. C. H. Baker, Bay City; Delegate to State Society, Dr. T. A. Baird; Alternate, Dr. J. C. Grosjean.

Our present membership (paid-up members) is less than at the close of last year on account, principally, of lapses for non-payment of dues. An effort will be made to get these men to pay up this year.

We made an attempt to secure a contract with the county for taking care of the poor in Districts No. 1 and 2, but were not given a show by the Poor Board. The men who hold the contracts are not members of the society, and apparently have more political pull. Will try again this year.

At the annual meeting the society members expressed themselves in favor of the Medical Defense League.

R. C. PERKINS, *Retiring Sec'y.*

**Emmet.**

At the annual meeting, which hereafter will be held the second Tuesday of December, the following officers were re-elected for 1909: President, L. W. Gardner, Harbor Springs; secretary-treasurer, G. W. Nihart, Petoskey.

G. W. NIHART, *Sec'y.*

**Branch.**

The annual meeting of the Branch County Medical Society was held at the Southern Michigan Hotel parlors in Coldwater, Tuesday, January 19, 1909. The meeting was well attended and every member seemed to take an active part in the program.

The scientific program contained papers by the local members.

The following papers were read and discussed:

1. The Treatment of Chronic Suppurative Inflammation of the Middle Ear, by Dr. W. A. Griffith, Coldwater.

2. Some Remedies and Their Indication in the

Treatment of Puerperal Eclampsia, by Dr. E. E. Hancock, Girard.

3. Clinical Significance of Indicanuria, by Dr. R. C. Whitmore.

The election of officers for 1909 resulted as follows:

President, A. G. Holbrook, Coldwater; Vice-President, E. E. Hancock, Girard; Secretary and Treasurer, Samuel Schultz, Coldwater. Delegates to the next annual state meeting, W. A. Griffith, Coldwater; E. E. Hancock, Girard. Alternates, A. G. Holbrook, Coldwater; S. R. Turner, Bronson.

At the completion of the regular program the members retired to the dining room and partook of a good supper.

The next meeting will be held in Bronson, the third Tuesday in April.

The year just closed was a prosperous one for Branch County Medical Society. There are twelve active members, two new members being admitted for 1909.

S. SCHULTZ, *Sec'y.*

**Houghton.**

At the annual meeting of the Houghton County Medical Society the following officers were elected: President, W. K. West, Painesdale; Vice-President, C. H. Rupprecht, Calumet; Secretary, John MacRae, Calumet.

JOHN MACRAE, *Sec'y.*

**Huron.**

The Huron County Medical Society held its regular quarterly meeting at Bad Axe January 11, 1909. Dr. W. J. Herrington read an interesting paper on "Intestinal Obstruction," which was thoroughly discussed.

The following resolutions were considered and adopted:

Moved by Dr. Herrington and seconded by Dr. Jackman—

*Resolved*, That the members of Huron County Medical Society are strongly in favor of a State Defense League.

It was moved by Dr. Conboy and seconded by Dr. Morden—

That the President of the Society appoint a committee of three to correspond with Senator Wm. Alden Smith and Congressman McMorran, urging the concentration of the different health bureaus into one department.



In accordance with the above resolutions Drs. Herrington, Friedlander and Conboy were appointed to act as such committee.

D. CONBOY, *Sec'y.*

### Kalamazoo Academy.

On the 10th of December, the Academy held its annual meeting, at which Dr. R. E. Balch, of Kalamazoo, was elected President; Dr. Frederick Shillito, Kalamazoo, First Vice-President; Dr. O. M. Vaughan, Covert, Second Vice-President; Dr. J. H. Crosby, of Otsego, Third Vice-President; Dr. G. D. Carnes, of South Haven, and Dr. O. H. Clark, of Kalamazoo, were re-elected to the Board of Censors. Dr. J. C. Maxwell, of Paw Paw, and Dr. A. W. Cranc, of Kalamazoo, were nominated as delegates to the State Medical Society, and Dr. B. A. Shepard, of Plainwell, and Dr. Herman Ostrander, of Kalamazoo, alternates.

Dr. J. Clarence Webster, of Chicago, gave a very interesting talk on "Some Clinical Experiences." He confined his remarks to Diseases of the Urinary Tract in Women. Dr. Robert H. Babcock, of Chicago, talked on "Chronic Infections in the Etiology of Myocardial Disease," speaking especially of the relationship between diseases of the gall bladder and myocardial affections. Dr. Russell H. Boggs and Dr. J. W. Boyce, of Pittsburg, Penna., spoke on "The Value of the Roentgen Rays in Thoracic Disease." Dr. P. M. Hickey, of Detroit, and Dr. Henry Hulst, of Grand Rapids, were present and took active part in the discussion of the papers.

In the evening, the members of the Academy and invited guests were entertained at dinner at the Michigan Asylum and following the banquet, Dr. A. I. Noble, of the Asylum, acted as toastmaster. Dr. C. E. Boys, of Kalamazoo, responded to the toast, "The Medical Profession, Then and Now." Dr. Paul T. Butler, of Kalamazoo, "The Doctor in Politics"; Hon. A. J. Mills, President of the Board of Trustees, was to respond to a toast, but was unable to be present. Many of the guests from the city and from away, as well as Mr. E. C. Adams, expert in legerdemain, assisted in making the evening one of the most enjoyable events the Academy has had for a number of years.

During the past month twelve new members have been taken into the Academy and the coming year gives promise of being a very prosperous one. Dr. M. Springer, of South Haven, has resigned from the Academy and has moved to

Charlevoix county. Dr. C. H. McKibbin, of Kalamazoo, who has been spending some months in California on account of illness has returned. Dr. W. H. Baldwin, of Kalamazoo, has resigned from the Academy and has moved to Coldwater, Mich. Dr. H. Hoover, of Alamo, has resigned and moved to Eaton county.

The regular January meeting of the Academy of Medicine was held on January 11th. Dr. D. M. Cowie, of Ann Arbor, gave a paper on "Some Clinical Experiences in Blood Pressure" and Dr. Walter den Bleyker, of Kalamazoo, read a paper on "Hypodermoclysis of Physiological Salt Solution." There were thirty physicians present. Dr. W. W. Lang, of Kalamazoo, Drs. George Cornish, of Lawton; C. A. Bartholomew, of Martin; W. P. Pope, of Lawrence, and L. J. Crum, of Richland, were elected to membership. The Academy has arranged a program for evening meetings every two weeks beside the regular monthly meetings in the afternoon.

G. F. INCH, *Sec'y.*

### Kent.

Kent county has fallen into line and is broadening its scope by the adoption of the following amendment to its constitution:

*"Resolved, That Article Three of our Constitution be so amended as to read, 'Every physician residing and practicing in Kent county and who is a legally registered practitioner of medicine and who is in good moral and professional standing, shall be eligible for membership.'"*

Our Program Committee has arranged evenings for the appearance of the following noted men before our society this coming winter: Dr. Preston M. Hickey, Detroit; Dr. Chas. W. Hitchcock, Detroit; Dr. Darling, Ann Arbor; Dr. Wm. L. Ballanger, Chicago; Dr. Hewlett, Ann Arbor; Dr. Woods Hutchinson, New York City; Dr. Robbins, Detroit. The committee is still in correspondence with several other gentlemen whom we expect to be able to add to our program in addition to the above named.

Dr. W. T. Dodge, Councillor of the Eleventh District, Big Rapids, read a paper before our society on "The Elimination of Cavities in Bone Surgery" before a largely attended meeting on January 13th.

We are sorry to chronicle the commitment of one of our members, Dr. James Ardiel, to the Kalamazoo Asylum. The doctor's condition had

become such that it was not considered safe to allow him to remain unguarded.

We are now sending out our notice of meetings in the form of an eight-page printed bulletin, which contains the program for the coming meeting, committee reports, society notes and news, and rostrum of our committees. This bulletin is mailed to every physician in Kent county whether a member or not, and thus acts as a means of conveying to non-members the many good things they are missing by not being members. We will gladly add to our mailing list the name of any physician outside of our county, upon remitting 15 cents in stamps to cover postage for the year.

F. C. WARNSHUIS, *Sec'y.*

**Mecosta.**

A very interesting and enthusiastic meeting of the society was held at Big Rapids, January 5, 1909, which was largely attended. Much interest was manifested in the following program: "Some Evolutions in Therapeutics," Dr. L. S. Griswold; "Pneumonia," Dr. J. B. Campbell; "The Necessity of a Thorough Urinalysis," Dr. P. M. Fischer; "Clinical Case," Dr. G. McAllister; "Clinical Case," Dr. L. S. Griswold.

Dr. L. S. Griswold, Big Rapids, was elected delegate to the Kalamazoo meeting of the State Society and Dr. J. B. Campbell, of Stanwood, alternate.

DONALD MACINTYRE, *Sec'y.*

**Muskegon-Oceana.**

Although saddened at its close by the death of genial Dr. Bloch, the year just terminated has been one of the most successful in the history of this society. The committee on program and scientific work has thought best to continue for another year the plan of arrangements for meetings and papers which has been followed by the society during the year just passed.

That plan was as follows: Meetings every two weeks—alternating evening and afternoon. A paper shall be read at each meeting by a member of the society. One or two members shall previously be appointed to open the discussion. Meetings shall be held at the office or residence of the member reading the paper, if convenient for this to be done. Otherwise at some other suitable place.

It is not expected that anything extensive shall be provided by any member for entertainment of the society aside from the paper to be read.

It is expected that some social dinners shall be arranged in connection with some meetings. These, however, shall be arranged by the society and shall be arranged with the expectation that each member participating shall pay an equal share of the expense incurred.

Meetings shall be held with members as their names shall appear alphabetically, alternating first and last on the list as closely as this rule can be followed. One or two members have been omitted agreeable to that member's personal request. The alphabetical arrangement has been changed sufficiently to make the out of this city meetings come during the summer.

It is earnestly requested that each member select the subject for paper as early as possible and notify the secretary.

The schedule for meetings for 1909 is, therefore, as follows:

Jan. 8, at 8:30 p. m.—Dr. W. A. Campbell, Muskegon. Subject: "Convulsions in Infancy and Childhood." Discussion led by Drs. Geo. S. Williams, Jacob Oosting and L. I. Powers.

Jan. 22, at 4 p. m.—Dr. Geo. S. Williams, Muskegon.

Feb. 5, at 8:30 p. m.—Dr. V. A. Chapman, Muskegon.

Feb. 19, 4 p. m.—Dr. J. P. Sullivan, Muskegon.

March 5, at 8:30 p. m.—Dr. R. G. Cavanagh, Muskegon.

March 19, at 4 p. m.—Dr. A. A. Smith, Muskegon.

April 2, at 8:30 p. m.—Dr. J. T. Cramer, Muskegon.

April 16, at 4 p. m.—Dr. P. A. Quick, Muskegon.

April 30, at 8:30 p. m.—Dr. C. P. Donelson, Muskegon.

May 14, at 4 p. m.—Dr. L. T. Powers, Muskegon.

May 28, at 8:30 p. m.—Dr. B. T. Black, Holton.

June 11, at 8:30 p. m.—Dr. J. H. Nicholson, Hart.

June 25, at 8:30 p. m.—Dr. V. J. Blanchette, Walkerville.

July 9, at 8:30 p. m.—Dr. Chas. F. Smith, Whitehall.

July 23, at 8:30 p. m.—Dr. J. D. Buskirk, Shelby.

Aug. 6, at 8:30 p. m.—Dr. G. F. Lamb, Pentwater.

Sept. 3, at 8:30 p. m.—Dr. W. L. Griffin, Shelby.

Sept. 17, at 8:30 p. m.—Dr. L. W. Keyes, Whitehall.

Oct. 1, at 4 p. m.—Dr. L. N. Eames, Muskegon.

Oct. 15, at 8:30 p. m.—Dr. Jacob Oosting, Muskegon.

Oct. 29, at 4 p. m.—Dr. F. W. Garber, Muskegon.

Nov. 12, at 8:30 p. m.—Dr. F. B. Marshall, Muskegon.

Nov. 26, at 4 p. m.—Dr. G. J. Hartman, Muskegon.

Dec. 10, at 8:30 p. m.—Dr. J. F. Denslow, Muskegon.

Through an error Dr. R. G. Olson's name was omitted from the list of physicians of Muskegon-Oceana County Medical Society Schedule for 1909. Dr. R. G. Olson, of Muskegon Heights, will read a paper at one of the fall meetings.

V. A. CHAPMAN, *Sec'y.*

#### Osceola-Lake.

The officers of the Osceola Lake Society for the following year are: President, U. D. Seidel, Reed City; Vice-President, J. H. Thomas, LeRoy; Secretary-Treasurer, D. S. Fleischhauer, Reed City; Delegate, A. Holm, LeRoy; Alternate, H. L. Foster, Reed City.

D. S. FLEISCHHAUER, *Sec'y.*

#### Sanilac.

The seventh annual meeting of the Sanilac County Society was held at Sandusky December 21, 1908, when the following were elected officers: President, Dr. George B. Tweedie, Sandusky; Vice-President, Dr. George Simenton, Marlette; Secretary-Treasurer, Dr. James W. Scott, Sandusky; Delegate to State Society, Dr. James A. Fraser, Lexington; Alternate, Dr. H. H. H. Learmont, Crosswell.

JAMES W. SCOTT, *Sec'y.*

#### Shiawassee.

At the annual meeting of the Shiawassee County Medical Society the following officers for the coming year were elected: President, Dr. A. L. Arnold, Owosso; Vice-President, Dr. Edwin Elliott, Chesaning; Secretary-Treasurer, Dr. R. C. Mahaney, Owosso; Delegate, Dr. W. E. Ward,

Owosso; Alternate, Dr. W. L. Parker, Corunna. Drs. George Sackrider, of Henderson, and Otis M. Cope, of Bancroft, were elected to membership.

C. McCORMICK, *Retiring Sec'y.*

#### St. Clair.

At the annual meeting held in December the following officers were elected: President, Dr. A. D. MacLaren; Vice-President, Dr. R. C. Fraser; Secretary-Treasurer, Dr. R. K. Wheeler.

R. K. WHEELER, *Sec'y.*

### News

Dr. H. Hoover, formerly of Alamo, is now located in Eagle.

Dr. H. F. Thomas, of Allegan, has been appointed by Governor Warner to fill a vacancy on the board of pardons.

Dr. R. L. Kennedy, superintendent of the State Hospital for Tuberculosis at Howell, has been granted a leave of absence for three months.

Dr. Gilbert P. Johnson, Detroit, sustained a scalp wound and severe bruises recently, as the result of colliding in his auto with a street car.

There is a movement on foot to rebuild Harper Hospital. Plans are under consideration for a modern, fire-proof, six-story structure, of 500 beds. Nearly a half million dollars have been pledged by a comparatively small number of individuals during the last two years, and it is expected that the total necessary amount can be obtained by active work by the committee of trustees.

The epidemic of scarlet fever which started in the University Hospital, Ann Arbor, last November, was quickly controlled by the vigorous quarantine, and the usual regime has been resumed.

Donald McDonald, a former clergyman, was found guilty by the Menominee court for practicing medicine without a license on December 1; sentence was deferred.

In St. Louis, November 28, a "Tag Day" was held, during which \$21,874 was collected for the hospitals in the city.



The Nobel prize for medicine for 1908 is to be divided between Metchnikoff of Paris and Ehrlich of Frankfurt-am-Main.

Dr. Francis Jones has been appointed surgeon for the G. T. R. R. at Potterville, in the place of Dr. R. H. Locke, resigned.

Dr. G. E. Thomas, of Charlotte, has been appointed to the staff of army surgeons.

A "Tag Day" was held in San Francisco which netted \$28,101.52 to the fund for the Children's Hospital.

The foot-and-mouth disease is reported to have been epidemic in 49 localities in five counties of New York state. The disease has now been stamped out.

Dr. Flemming Carrow, Detroit, has returned from a trip to Missouri. He has practically recovered from the fracture of the foot which he sustained in November.

Dr. Robert McGregor, of Saginaw, has sailed for a visit to Australia and New Zealand.

Dr. Wadsworth Warren, Detroit, has been elected fleet surgeon of the Interlake Yachting Association; Dr. C. G. Jennings is delegate to the Yacht Racing Union.

The many Michigan friends of Dr. Otto Freer, of Chicago, will be glad to learn of his return from Europe and of the reception he met with from the colleagues abroad. He held clinics and gave demonstrations for his sub-mucous operation for nasal deflections in London, Edinburg, Copenhagen, Berlin, Freiberg, and Paris, to large and interested audiences. Prof. Killian, though a rival in this work, invited him to demonstrate his methods in his clinic at Freiberg. Dr. Freer's reception and the kindness shown him in the various medical centers of Europe should be a source of congratulation to honest, painstaking endeavor in this country.

Dr. Wilfrid Haughey, of Battle Creek, has given up general practice to devote his time to diseases of the eye, ear, nose and throat.

Dr. A. W. Crane, of Kalamazoo, was elected vice-president of the American Roentgen Ray Society at its last annual meeting.

The Michigan Society for the Study and Prevention of Tuberculosis will hold its annual meeting at the Hotel Pontchartrain, on Friday afternoon, February 26, 1909.

Deaths

Lewis E. Higbee, M. D., of Potterville, local surgeon to the Chicago & G. T. R. R., died at his home from cerebral hemorrhage, December 9, aged 62.

Dr. Lawrence Darling Knowles, for years one of the leading physicians of Three Rivers, died at his home December 29, 1908, of angina pectoris.

At the outbreak of the Spanish-American war he was recruiting surgeon for the Thirty-first Michigan, enlisting in that regiment with the rank of major. He was later promoted to be brigade surgeon, with the rank of lieutenant-colonel. At the time of his death he was a member of the state board of pension examiners.

Obituary

John Gladwin Johnson, M. D.  
1843-1908

In the death of John Gladwin Johnson, which occurred December 31, 1908, the medical profession of Detroit lost a man who was polished, cultured and refined.

Dr. Johnson was born at Steubenville, Ohio, in April, 1843, and his early education was pursued at near-by schools. He graduated, when 20, from Washington and Jefferson College, and was then appointed, by Secretary of War Edwin M. Stanton, to a position in the War Department at Washington, which position he filled for some three or four years, in the meantime commencing his medical education, which was completed in Europe. After three years' residence in Heidelberg, he received his medical degree there, and then spent a year in study in Paris. Upon his return to this country he entered practice at Steubenville, Ohio, where he at first did much surgical practice, and here he married.

In 1872 he came to Detroit and practiced there until his death. After the death of his first wife he married Miss Parker, of Detroit, who survives him.

He was at one time Professor of Nervous and Mental Diseases in the Detroit Medical College, but teaching was distasteful to him and he was never free from embarrassment, so he said, in the class-room. His lectures, however, were those of a careful and polished student, who was thor-

oughly conversant with the subjects of which he spoke.

For over thirty-five years (since June, 1872) he was Attending Physician to St. Joseph's Retreat, now at Dearborn. His genial, helpful and accommodating spirit is warmly attested by one

played well upon the violin and delighted in evenings of music with his chosen friends. Though for some time in failing health, he persisted in keeping at his professional work which he so loved, to the very last. Up to the time of his death, he did a large obstetrical practice, and



**John Gladwin Johnson, M. D.**

1843 - 1908

who came into long contact with him in this service.

Dr. Johnson was of a modest and retiring disposition, which prompted him to cultivate the intimate society of a small coterie of chosen friends rather than mingle largely in a wider circle of acquaintances. His tastes were cultured and refined, and he was decidedly of an artistic temperament. An enthusiastic musician, he

it is said that he never lost a mother in confinement.

His ideals and standards were high, his integrity of character beyond reproach. There has gone from us one who was thoroughly well-educated, of natural refinement, of that type of which we never have too many—the high-minded Christian gentleman.

C. W. HITCHCOCK.

**Sigmund Bloch, M. D.**  
**1846-1908**

Dr. Sigmund Bloch, one of the most prominent and highly respected physicians of Muskegon, died, after an illness of two weeks' duration, on December 20, 1908.

Dr. Bloch was born at Pilsen, Bohemia, June 7, 1846; was educated for nine years at a monastery, later attending the gymnasium in Vienna. He then spent two years at literary studies at the University of Prague. The son and the grandson of a physician, he decided to take up medicine and received his medical training at the University of Vienna, with a year of hospital work at the Allgemeines Krankenhaus. He then served his military period in the Sanitary Corps and saw active service in the Prussian war. He came to America in 1880 and, after a short stay in New York city, settled in Muskegon.

Muskegon was at that time in the height of its lumber era, which meant a large foreign population employed in the mills. Many families then here were so recently come to this land that they could not speak their new-found language. On this account in particular, Dr. Bloch, with his fine linguistic command, was more or less of a godsend. To him they could pour out their woes in the freedom of their mother language, while he in turn took away much of the terrors of their American speechlessness.

No one knows how far his command as a linguist went. He spoke German of course, French, the Scandinavian tongues, Spanish, and their allied languages. As a student in Greek and Hebrew, he was equally at home.

Aside from the regular path of his profession Dr. Bloch was also deeply interested in public welfare. It is to him in particular that Muskegon owes its pure Lake Michigan water, on which so greatly the good health of this city depends. As a member of the common council at that time, he was chairman of the committee on water. The battle that it became necessary to wage was a long and difficult one, but he fought it earnestly, and finally succeeded with others in carrying the project through to success.

Dr. Bloch married Mrs. Nellie S. Weller, of Muskegon, on August 28, 1893, at Charles City, Iowa. She alone survives him here. In Bohemia he leaves a sister, Mrs. Charlotte Weis, who lives in their native town in Pilsen.

The deceased was an enthusiastic member of the Muskegon-Oceana Medical Society and will be sadly missed at its meetings.

**DERMATOLOGICAL "DON'TS."**

Don't be too hasty in a positive diagnosis, certainly not from inspecting any single portion of an eruption; many a cutaneous disorder will present very different appearances in different localities.

Don't fail to examine each and every part affected, both for diagnostic and therapeutic purposes.

Don't forget that a patient may have several entirely distinct and different diseases of the skin at the same time, one of which may mask the other and confuse the diagnosis.

Don't forget to get and keep a full written history of every case, recording symptoms at each visit, with the effect of remedies, and abbreviated copies of prescriptions given.

Don't fail to use a magnifying glass in observing and studying all lesions on the skin, however good the vision may be; it demonstrates details in eruptions which the naked eye overlooks.

Don't lose sight of the value of the microscope when there is any suspicion of a vegetable parasitic disease.

Don't forget that syphilis is a great imitator of many diseases of various organs, and that in most dermatological statistics it forms about one-tenth of all cases.

Don't fail to establish the fact clearly whether syphilis has or has not anything to do with the special case under consideration.

Don't exclude syphilis simply because of the absence of a venereal history, if the character of the eruption and sufficient history and other symptoms corroborate it.

Don't ignore the fact of the relative frequency of "syphilis in the innocent," and don't fail to search for the present or past point of entrance of the poison by means of an extra-genital chancre, when other explanation is absent.

Don't forget that the urine affords an index as to how the metabolic processes are performed; also that while there may be no albumin, casts, or sugar found in it, its chemical constitution may be far from normal and indicate great metabolic errors which should be corrected.

Don't forget, in cases which are at all doubtful, to use the analytical method of diagnosis, noting down any and all eruptions which might look like the one under consideration, and then by a process of exclusion, eliminate one after the other, until the one is found which answers all or most of the requirements.—*Bulkley.*



## Progress of Medical Science

### MEDICINE.

Conducted by

T. B. COOLEY, M. D.

**Roemer's Antipneumococcus Serum.**—MONTI describes 12 cases of croupus pneumonia treated with Roemer's serum, which seems to differ from its predecessors chiefly in being a mixture of sera from animals of different species; with the purpose of having as many different varieties of immune bodies as possible. It is given in doses of 20 to 40 c. c. The cases were all typical, and without complications. No other treatment than the serum was used. Favorable effects were noted in all as follows:

1. Under the administration of the serum, crisis and resolution occurred in all cases—in 3 on the second day, in 6 on the third, and in 3 on the fourth. While no normal time can be set for the occurrence of the crisis, it is remarkable that it should have been before the fifth day in every case.

2. In every case there was after the injections a striking lessening of dyspnea and improvement in general condition, such as MONTI has not observed with any other method of treatment.

3. The influence of the serum on the temperature depends on the proportion of the dose given to the severity of the case. If the dose be proportionately too small, it may have no effect, and further injections will be needed to influence the temperature and the local process. It seems probable that one large dose at the onset, or several small doses in the first 12 hours, might produce results more quickly than the method followed in these cases. Abortion of the pneumonic process did not occur in any case. The injections were always well borne, and produced no unpleasant results.—*Arch. f. Kinderheilkunde*, Vol. 47, p. 45.

**Internal Use of Tuberculin.**—MOELLER often finds it desirable to give tuberculin, whether for diagnostic or therapeutic purposes, in some other way than by hypodermic injections or local application. This may be on account of the sensitiveness of the patient, or circumstances which render it more convenient that he administer the drug himself. After experimenting with various methods of administration by the alimentary tract, MOELLER has found capsules of "Gelodurat"—an elastic substance wholly unattacked by the gastric juice, but soluble in the small intestine—

to be wholly satisfactory. The mixture he uses for therapeutic purposes in these capsules he calls "Tuberoïd." It consists of tubercle emulsion, "Timothein"—a product of the timothy bacillus which is said to give rise to the same reactions as tuberculin, but in a milder form—and calcium formate, which is added on account of the stimulating properties of the formic acid, and the increased fibrin formation from the administration of calcium. MOELLER claims that diagnostic reactions and therapeutic effects are fully as satisfactory with this form of administration as with injections.—*Munch. med. Wochens.*, Nov. 10, 1908.

**Relation of Avian to Mammalian Tuberculosis.**—MAX KOCH and L. ROBINOWITZ have made an exhaustive study of avian tuberculosis in the birds at the Berlin Zoological Garden. They conclude that the avian form of bacillus is a modification of the family of tubercle bacilli which has become adapted to the species from an origin common to it and the mammalian forms. They show that tubercle is very common in birds, and that all of the different orders and species may become infected with it. The lesions are in the abdominal organs and lungs, and are analogous to the caseous process in animals. Infection is commonly by means of food, but may be by inoculation by beak or claws, and occasionally by inhalation. Interesting evidence is offered in favor of congenital infection. In the Zoological Gardens infection is commonly carried by rats and mice. In the Garden birds only 3 were found to be infected with bacilli of the human type, but all gradations were found, from the typical avian to the true bovine form. In one case repeated passage of avian bacilli obtained from a parrot through guinea pigs led to the appearance of bacilli resembling the human type. Spontaneous and artificial infection of rats and mice with avian bacilli was frequently observed. Goats and cattle were also found to be susceptible to the bird type. On the other hand, hens and the birds of prey were not susceptible to mammalian forms of bacilli except indirectly through infecting the egg.—*Suppl. Virchow's Arch. Abs. Brit. Med. Jour.*, Nov. 14, 1909.

## SURGERY.

Conducted by

C. S. OAKMAN, M. D.

**Newer Conceptions of Operative Technic in Cleft-Palate and Harelip.**—Many operators believe, with Arbuthnot Lane, that early operation is preferable for cleft-palate, because the baby weighs relatively more just after birth, resistance has not been decreased by mouth breathing, digestion is unimpaired as yet by difficulties of feeding, the bones are softer, sensation of pain is not acute, wrong habits of articulation have not been acquired, palatal muscles and nasopharynx develop better, the nose attains a more normal shape. The danger from hemorrhage is slight, and the author believes there is no truth in the tradition that infants do not bear hemorrhage well. As to the advisability of repairing a harelip at the same operation, EASTMAN argues in favor of it, for the following reasons: The soft parts removed from the lip may help to complete the palatal defect; the chances of union are better than at a later period; the pressure of the sutured lip assists in the restoration of the premaxilla and the closure of the cleft-palate. Lane and Sherman uphold these arguments, but Brophy postpones the repair of the lip until the palate is completely closed.

The best position for the patient for operation is the dorsal, with head extended over the edge of the table or over a pillow; a suitable gag must be used, such as that of Lane. Denudation of the edges must be thoroughly done, with bevel on the nasal side; the mucous membrane, together with the periosteum, should be separated carefully from the hard palate; if the arch is high and narrow, the flaps thus made will fall together easily; if the arch is low and wide, it may be necessary to make lateral incisions parallel with the suture line, in order to avoid too great tension; these incisions can be packed with gauze, to act as a support. The author prefers small caliber chromic catgut as suture material, and does not advocate the attempt to provide a mucous covering above as well as below. He approves of Brophy's method in cases of complete cleft, and lays stress on the fact that no single procedure will ever be applicable to all cases.

In after-treatment it is recommended that infants be fed for the first two days by rectal enemata, and after that, sterile milk by mouth.

The author also describes in detail the recent advances in the surgical treatment of hare-lip. The whole article is profusely illustrated.—*Annals of Surgery*, January, 1909.

**The Question of Diagnosis in the Case of a Patient Complaining of Indigestion.**—AGNES VIETOR classifies the symptoms that the laity attribute to indigestion; first, there is the discomfort due to sensation, manifested as local feelings of fatigue, heaviness, pressure, distention, dragging, aching, pain of various kinds—dull, sharp, intermittent, constant—burning, emptiness, or nausea. These all may be differently influenced by eating and drinking. Second, the discomfort may be one of action, manifested by silent or noisy peristalsis, eructations, regurgitation, or vomiting.

These two groups of phenomena—sensory and motor—have always been interpreted by the laity as indigestion, and likewise often by physicians. This diagnosis has naturally led to therapeutic effort in the line of modifying the digestive function or the food ingested. This is usually unsatisfactory, and the explanation is found in the great variety of pathological conditions giving rise to these symptoms. In seeking for a more definite diagnosis, all the possibilities must be remembered; there are extra-abdominal conditions that may be the cause, such as tuberculosis, tabes, non-pancreatic diabetes, anemia, toxemia, arteriosclerosis, and lesions of the pelvic, thoracic, cerebral, or peripheral sense organs; there are lesions of organs lying in the abdomen, but outside of the epigastrium, such as displacements, affections of the small and large intestines, cecum, appendix, etc., there are conditions of the abdominal wall, such as atony, pendulousness, hernia, diastasis of muscles, tumors, etc. If all the above conditions can be excluded, it remains to seek the cause in the middle trunk zone; the possibilities to be considered are, the various displacements of the stomach, gall-bladder, and kidneys, with or without adhesions; these displacements produce all grades of traction, kinking, and torsion, interfering not only with the physiological competence of these organs, but also altering the nervous, vascular, and lymphatic relations may have the effect of changing secretions, obstructing or dilating cavities and canals, producing congestion, trophic changes, atony, ulceration, etc. The presence of an incompetent abdominal wall, VIETOR thinks, is indicative of visceral displacement, and her observations lead her to believe it is the beginning of many ills.—*Surg. Gyn. and Obst.*, January, 1909.



## PHARMACOLOGY AND THERAPEUTICS.

Conducted by

H. A. FREUND, M. D.

**The Action of Arsenic on Red Corpuscles.—**

GUNN contributes an interesting number of conclusions on the action of arsenic on the red blood corpuscles. Various authors have come to the conclusion that, because arsenic seems to have no direct effect in increasing the production of red blood cells, its beneficial results must come from its specific action on the parasites of the disease for which it is given. In a series of experiments in which the author has mixed arsenic in a suspension of blood corpuscles, arsenious acid becomes fixed to the red blood cells. This process takes place rapidly, and furthermore protects the erythrocytes against the hemolytic action of distilled water. He believes that the arsenic in some way affects the stroma of the red cells in the hemoglobin, but as this stroma is known to contain lecithin and cholesterol, he believes that these two substances should be given a thorough trial in every case of pernicious anaemia. This is especially so, he believes, because we have no single drug to actively combat that disease with.

—*British Medical Journal*, December, 1908.

**The Treatment of Diphtheritic Paralysis.—**

ROLLESTON, speaking of the treatment of diphtheritic paralysis, insists that prophylaxis is of the utmost importance and should be attempted by rest in bed in the recumbent position for periods varying from three weeks after a mild angina to seven or eight weeks after a severe primary attack. If no paralysis has developed by the end of the seventh week, the patient may safely be allowed to sit up, and in a few days to leave his bed. The persistence of slight ocular or palatal palsy after that date does not contraindicate the patient sitting up, provided the diaphragm and pharynx are unaffected.

Cardiac dilatation and arrhythmia are sometimes very persistent after diphtheria, but, in the absence of other contraindications, no useful purpose results by keeping such patients in bed beyond the eighth week.

The author recommends the employment of adrenalin as a prophylactic against cardiac paralysis. He uses it to the entire exclusion almost of other drugs, especially during the acute stage. The best results are obtained by giving 10 minims every two hours during the first ten days. The symptoms of suprarenal insufficiency, manifested, according to ROLLESTON, clinically by arterial hypotension and neuromuscular asthenia, and anatomically by cloudy swelling, necrosis and hemorrhage justify the use of this substance.

On the occurrence of vomiting, associated with

cardiac paralysis, mouth feeding should be discontinued, and nutrient enemata, each containing 20 minims of adrenalin, should be given every four hours. The employment of large doses of tincture of belladonna in alternate nutrients with 30 grains of potassium bromide will act sometimes where adrenalin fails.

Owing to concurrent anesthesia of the larynx and the resulting accidents that are possible rectal feeding is recommended during pharyngeal paralysis. It can be readily employed, as paresis of the throat is of short duration usually. Thirst can thus be always readily relieved by giving 6 ounces of water twice in 24 hours while pharyngeal paralysis lasts, or if very severe the foot of the bed should be well elevated so that mucus will drain out through the nose and mouth.

The author is inclined finally to the belief, owing to the failure of diphtheritic paralysis to improve more rapidly after the administration of antitoxin, as Comby recommends, that the success ascribed to it by some comes from a psychotherapeutic rather than a specific action.—*Practitioner*, London, January, 1909.

**Experimental Basis for the Use of Bromides.**

—Some recent investigations on this subject have given valuable data to guide us in the administration of the bromides. Wyss has shown that they accumulate in the tissues to the complete exclusion of the chlorides in time. Animals become atactic and at times develop a fatal paresis. Chlorides, however, administered at the last moment will quickly restore them. The author here gives reasons for believing that chlorides are essential to the functioning of the motor nerves.

Wyss believes that an abnormally high concentration of bromides in the blood can be prevented by maintenance of chlorides in the system. Still he finds that clinically the value of the bromides in such conditions as epilepsy depends on the reduction of the amount of chlorides and the retention of the bromide ions. Thus by the generous and continued administration of the bromides, together with a salt-free diet, approaches the end desired. This may be dangerous except in urgent cases.

The author thinks that the hypnotic effect of the bromides is much exaggerated, so that they are contraindicated in all mental and psychical conditions, like neurasthenia and hysteria. They are here injurious to a metabolism that usually requires assistance.—*Medizinische Klinik*, Nov. 22, 1908.



## PATHOLOGY AND BACTERIOLOGY.

Conducted by

C. E. SIMPSON, M. D.

**The Nature of the Cancerous Process.—**

PARK's article, as is to be expected from his earlier writings, is a strong argument in favor of considering cancer as an infectious parasitic disease. As long as 250 years ago Tulpus, the Dutch anatomist, made this statement, "Cancer is just as contagious as inflammation of the eyes." Junker in 1731 maintained that cancer was contagious and Harvey the Great wrote that tumors strongly resembled parasitic productions in the vegetable kingdom. Present-day observers have been too content to rest with the statement of Virchow that carcinoma is an epithelial neoplasm whose component cells are not conforming themselves to normal habits or appearances. Around this various theories have been built but, PARK insists their building has been directed too much by laboratory workers, who study mainly the terminal condition. No observing clinician can fail to note the evidences of infectivity.

The principal reasons for believing in the infectivity of cancer are from both the clinical and the experimental side.

*I. Clinical.*

1. Direct transmission from a diseased to a previously healthy surface, as from lip to lip, or during operation.

2. Cancer à deux, as from wife to husband, or from patient to laundress.

3. Cancer houses, where numerous and successive cancer cases have appeared.

4. The epidemic appearance of cancer within limited regions.

5. Metastases.

*II. Experimental.*

1. The analogy that exists in the vegetable kingdom between the xiomata and other tumors of trees and plants and the production of innocent growths, benign tumors, *i. e.*, galls, well known to be the result of extrinsic irritations.

2. Epidemic appearances of cancer among animals, such for example as the occurrence of sarcomata in previously healthy rats which were placed in cages in which rats with sarcomatous tumors had been kept.

3. The actual transmission between animals of the same species of unmistakably malignant tumors. Prominent among experimenters in this field is Loeb, who transplanted tumors from one animal to another and determined that the transplanted tumors grow from transplanted cells. Further work was undertaken by the New York State Laboratory, especially on the question of immunity from cancer. From this laboratory Gaylord and Clowes announced that a considerable percent of animals recover spontaneously

from inoculation tumors, that they are then immune and that their blood exerts an immunizing effect on animals into which it is injected.

4. Occasional successful causation of tumors by injection into animals of human products. Though these experiments have rarely succeeded those which have been successful must be considered.

5. The general behaviour of the disease, namely its resemblance to other known infectious conditions with its reactions to certain serums, its tendency to hemolysis, its behavior to transfusion, etc. In this connection may be noted the observation of some American workers that the blood of immune dogs can be employed as a transfusion therapeutically. Ewing, Beebe, and Crile were able in this way to cure a large number of animals.

6. The same tendency to metastasis, with the same explanation as occurs in every other infection.

7. The practically complete demonstration that in animals it is an infectious disease and the unavoidable inference that if it be so in them it must also be in man.

To PARK the contagiousness of cancer is proved, indeed he makes the statement that its contagiousness is put beyond the pale of doubt.

It has been impossible to fully carry out Koch's law in regard to the proof of infectivity, for the reason that the parasite has not been cultivated and the disease is not capable of transmission outside of the species in which it originates. To overcome this latter difficulty PARK advocates using condemned criminals in experimental work. The same condition obtains in our knowledge of scarlatina, measles, and smallpox, yet we unhesitatingly pronounce them infectious.

Absolutely healthy tissues are almost if not quite immune from cancer parasites. If tissue decay occur in excess of repair, especially if accompanied by irritation, traumatism, or inherited susceptibility, then conditions favor the development of cancer. The parasites seem to be omnipresent. Raw foods constitute a source of possible infection.

Cancer, then, says PARK, is to be regarded as a specific disease, intensely infectious to the individual. It must be treated by observing the most efficient cleanliness, including the thorough disinfection of houses inhabited by cancer patients. Until some specific symptom of cancer be found and a method of influencing the parasitic growth and destroying the germ, thorough surgical removal is our only hope.—*Surgery, Gynecology, and Obstetrics*, November, 1908.

## NEUROLOGY.

Conducted by

C. W. HITCHCOCK, M. D.

**The Origin of the Facial Nerve.**—A case of neuritis of the facial and auditory nerves in the internal auditory meatus has furnished BRUCE and PRIE the opportunity of investigating this nerve, about the origin of which there has been so much controversy.

They reach the following conclusions:

1. That the upper facial nerve does not arise from the oculomotor nucleus.
2. That the lip-facial fibres do not arise from the hypoglossal nucleus.
3. That there is no crossed origin of the facial nerve from the main nucleus.
4. That no crossed origin for any of the fibres has yet been discovered.

5. That all the fibres of the facial nerve arise from the groups of cells in the pons which lie behind the superior olive, and are known generally as its main nucleus—these groups being regarded as including the small accessory group situated a little behind it (Wyrubow), i.e., nearer to the abducens nucleus.

6. That the upper facial nerve probably arises from the dorsal part of the nucleus.

7. That further localization of function of the nucleus has not yet been clearly established.—*Review of Neurology and Psychiatry* for December, 1908.

**Delayed Apoplexy.**—The literature of experimental and pathological apoplexy is reviewed, particularly as to the changes which take place in those conditions in which the evidence of apoplexy are first seen some time after the injury. A case of Spiller's is reported and the following conclusions reached from its study:

"(a) Traumatic delayed apoplexy (Spätapoplexie), in the sense of the original Greek is in all probability, an entity.

(b) Delayed apoplexy is not of necessity a condition in which hemorrhage takes place, but the stroke can have as its immediate etiological factor the occluding or thrombosis of one or more arteries.

(c) The cerebro-spinal fluid does not play a necessary part in the production of delayed apoplexy, and injury to the region of the aqueduct and fourth ventricle is a collateral circumstance of no etiological moment.

(d) In cases of delayed apoplexy in which hemorrhage takes place, the hemorrhage is not necessarily preceded by a process of necrotic

softening about the artery in question, this removing the outside support (Widerstandsfähigkeit), but the artery itself is injured as Langerhans holds, and the secondary rise in arterial pressure, or the normal pressure causes the hemorrhage.

(e) The mechanics of many cases of delayed apoplexy is as follows: The trauma to the head causes a mechanical agitation to the brain substance, which falls with greatest severity on the arteries, small and large, they being filled with an incompressible fluid. The particular location of the chief action on the vessels cannot be determined by the external impact of the blow or the direction of the force and is impossible of determination until revealed by symptomatology. At first there is in all probability a general vasomotor constriction of the cerebral arterial system followed very shortly by a paresis of the vessel walls. The vessels particularly injured undergo endothelial proliferation, and thrombotic processes are set up. Then occlusion, if in a functionally important area of the brain, can cause an apoplectic attack. To this class belongs my case.

In considering a case of what may be traumatic delayed apoplexy, a possible incompetence on the part of the kidney must be borne in mind and the action of a consequent uremia must be given full weight. The case I report had a slight amount of chronic interstitial nephritis and had she not come to necropsy one could not have positively stated whether there was a hemorrhagic or thrombotic condition on the one hand, or a uremic attack."—ALFRED REGINALD ALLEN, in *Journal of Nervous and Mental Diseases* for December, 1908.

**Facial Spasm Treated by Injections of Alcohol.**—PATRICK proposes this new treatment for tic convulsif of the face, and reports three cases with relief of spasm in two cases. He used a long hypodermic needle, injecting the alcohol (of 75% strength in one case and of 40% in the others) just in front of the mastoid process, the object being to reach the nerve at its exit from the stylo-mastoid foramen.

In the case of failure, the nerve was not reached. In the other two, the results were ideal, no facial paralysis of any account persisting.—*Journal of Nervous and Mental Diseases* for January, 1909.

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## Original Articles

### THE DIAGNOSIS AND TREATMENT OF PLEURISY WITH EFFUSION\*

FRANK SMITHIES, M.D.,

Ann Arbor.

It is with considerable trepidation that I venture to call the attention of the members of this society to so familiar a subject as pleural effusion. I am encouraged, however, by the hope that the outline which I have to present will call forth such discussion from men of more extended experience than myself as to render the time not altogether profitless.

In connection with a certain case of empyema, which recently came under my care, I had occasion to consult the literature on several points which will be detailed later. In some respects there was such a diversity of opinion, that it appeared worth while to review some of the case records at the University Hospital (Prof. Dock's service). The results of this search, together with a few observations, furnish the basis of this communication.

It is not my purpose to make this paper statistical. It might, however, be of interest to state that forty-seven cases were reviewed. Of these, four-fifths were males. The ages ranged from six to sixty-seven years. The patients were from all walks of life, students and farmers predominating. In but a few instances was the diagnosis of fluid in the

pleural sac made before the patients entered the hospital. The patients came for such a diversity of ailments as stomach trouble, typhoid fever, dilated heart, pneumonia, neuritis, la grippe, malaria, etc. In seven instances the effusions occurred during the course of pneumonias. In eight cases, tuberculosis appeared to be primary at the time of examination. Twenty-seven cases were febrile, the temperatures ranging from 99 to 103.5 degrees F. With but a few exceptions, these febrile cases might be classed as acute. The presence of fluid was proven by aspiration in thirty cases. In the remaining the physical signs were characteristic. There were ten empyemata. In other instances where fluid was definitely determined, the effusions were serous.

In summary, the laboratory findings were as follows:

**Blood:** When noted, the average white cell count in the cases with serous effusion was 8070; in the empyemata, the white cells average 11,400. The red cell count averaged for both classes of cases about 4,500,000. The average hemoglobin was 72%.

**Sputum:** Tubercle bacilli were found

\*Read (by title) before the Michigan State Medical Society, June 24, 1908, Manistee.



in three instances and pneumococci in two.

**Urine:** The examinations were usually negative. Small amounts of albumin, usually transitory and at the febrile period, were occasionally demonstrated. Casts of all kinds were frequently found, but rarely in large numbers.

In but a few of the cases could the diagnosis have been arrived at without careful consideration of the physical signs. It is to certain features that we invite your attention.

I am not going to burden this society with a routine consideration of the numerous phenomena seen in *inspection* of the patient. The more or less labored breathing with slight cyanosis about the face and the mucous surfaces have been observed by all. The evidences of pain on deep respiration or coughing are not wanting in acute cases, and frequently are the most distressing part of the patient's condition. The dyspnea on exertion is present in both acute and chronic cases, particularly the latter. Herpes is rare, and may sometimes be of distinct value in differential diagnosis between pleurisy with effusion and pneumonic consolidation, or may lead one to suspect consolidation where the phenomena of effusion are the more pronounced. This happened in two of my cases.

One can learn much from watching the thoracic movements. A good light is essential, one coming from towards the patient's feet being especially desirable. The thoracic movements during both inspiration and expiration should be carefully observed. To facilitate the work it is well to look for definite things. Where noted, all of my cases exhibited diminished expansion on the side on which effusion was subsequently proven. With but few exceptions, the lack of perfect expansion was most evident in the lower part of the thorax. Asymmetry between the two sides was usually noted when the breath was held, but was more

marked at the end of deep inspiration. The asymmetry could be readily proven in cases of moderate effusion by the use of the cyrtometer. This is a very simple instrument, but one which is but little used in this country. It consists of two strips of lead encased in leather. On the covering are markings graduating the halves of the instrument in centimeters. The numbering is from the middle towards the ends. A rubber mid-piece connects the halves. The method of use consists in accurately approximating the rubber mid-piece to a chosen vertebral spine and then snugly moulding the lead encased halves to the thoracic walls. Note is made of the distance from the middle at which the halves approximate anteriorly. The halves are removed carefully, and placed as flat as possible upon a sheet of paper. Tracing with a pencil gives a convenient graphic representation of the asymmetry existing between the two sides of the thorax. One should secure tracings from the thorax in inspiration and expiration. Appropriate serial tracings may readily be made at different rib levels. In chronic effusions, with associated deformity from contraction of adhesions, striking pictures are often secured.

Further information regarding thoracic movements and variations between the two sides of the thorax may be obtained by means of the saddle-tape. This instrument is used similarly to the cyrtometer. Care must be taken to prevent slipping. The observations should be made during both inspiration and expiration. The daily variations are frequently astonishing in a given case. They contribute valuable data concerning the spread or decline of an effusion, or lead one to suspect the existence of exudate in cases where consolidation is present. My cases show that but rarely does one find increase in the measurement of one side of the thorax in frank pneumonia. The opposite is frequently

the rule. In pleural effusion, the affected side frequently measures considerably more than the unaffected side, and especially at the end of expiration. The variations at the end of deep inspiration are not so pronounced.

Table I furnishes some suggestive information with respect to the use of the saddle-tape.

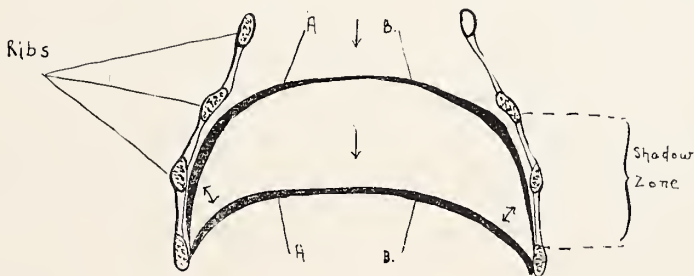
since Litten, of Berlin, called attention to the fact that with careful observation, in a good light, in the majority of thoraces, there could be observed during inspiration, a distinct shadow moving from above downward. During expiration the shadow moves upward. The usual site of this shadow is in the lower axilla. The shadow is generally

ILLUSTRATIVE CASES SHOWING OBSERVATIONS WITH SADDLE-TAPE AND UPON THE OCCURRENCE OF LITTEN'S PHENOMENON.

Case.	Side of Effusion.	Semi-Circumferences—Inches.				Fluid Aspirated.	Litten.
		Expansion.					
		R.	L.	R.	L.		
No. 1	R.	18 $\frac{5}{8}$	17	$\frac{1}{4}$	$\frac{1}{2}$	530 cc.	Absent
No. 2	R.	15 $\frac{3}{4}$	15 $\frac{1}{4}$	?	?	100 cc.	Absent
No. 3	R.	15 $\frac{1}{2}$	15 $\frac{1}{4}$	1 $\frac{1}{2}$	1	1000 cc.	Absent
No. 4	L.	16 $\frac{1}{2}$	15 $\frac{1}{4}$	1	0	100 cc.	Absent—Adhesion
No. 5	R.	15 $\frac{1}{2}$	14 $\frac{3}{8}$	$\frac{5}{8}$	$\frac{5}{8}$	600 cc.	Absent
No. 6	R.	17 $\frac{7}{8}$	17 $\frac{7}{8}$	0	$\frac{1}{2}$	100 cc.	Absent—Adhesion
No. 7	L.	15 $\frac{3}{4}$	16 $\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{2}$	1500 cc.	Absent
No. 8	R.	21 $\frac{1}{2}$	19	1	1	800 cc.	Absent
No. 9	R.	17	17	1	1 $\frac{3}{8}$	50 cc.	Absent ?
No. 10	R.	15 $\frac{1}{4}$	14 $\frac{1}{4}$	$\frac{1}{4}$	1	Not asp.	Absent

For some time, I have impressed upon my students the value of careful observation of the external evidences of the movements of the diaphragm. Clinically

more pronounced on the left side than the right. It is caused by the stripping off of the diaphragm from the thoracic wall as the expanding lung descends.



**Fig. 1.**  
**Litten's Sign in Normal Thorax.**  
**Frontal Section. (After Cabot.)**  
A B=Position of the Diaphragm at the Completion of Expiration.  
A' B'=Position of the Diaphragm at the Completion of Inspiration.

one sees many variations in rate, degree and situation of these evidences of movement. In no condition are the alterations so marked or important as corroborative testimony as where fluid is suspected in the pleural sacs. Many years

During expiration, with consequent relative collapse of the lung, the diaphragm arches upwards and the shadow line ascends (Fig. 1). Where fluid is present in the pleural sac, it will be readily appreciated (Fig. 2) that inasmuch as the

diaphragm is mechanically held away from the thoracic wall and at the same time more or less pushed downward, the movement during respiration is diminished or absent. As a result the shadow line in the axilla during inspiration and expiration is seen with difficulty or not

displaced, and especially in right-sided effusions. The displacement is manifested by the discovery of the apex beat beyond the nipple or in the axilla. In left-sided effusions, the apex beat may be lost beneath the sternum. It is sometimes surprising, however, to find a

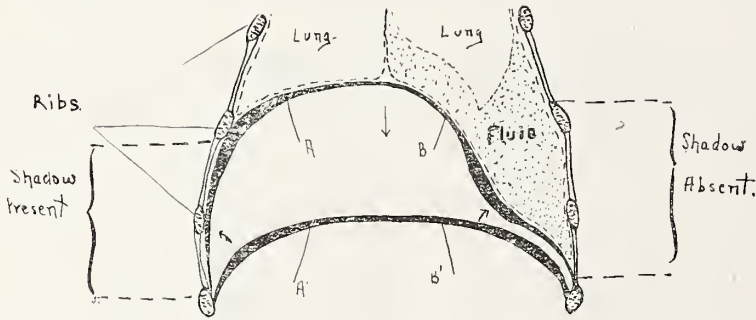


Fig. 2.

**Litten's Sign in Pleural Effusion.**

A B=Diaphragm during expiration mechanically held away from thoracic wall at B by fluid.  
A' B'=Diaphragm at end of inspiration; shadow present on sound side, but absent in region of effusion.

at all. The compensatory expansion of the lung on the unaffected side frequently brings about greater diaphragmatic movement on that side, with a correspondingly distinct shadow in the axilla. The majority of the cases reviewed for this paper show alterations in diaphragmatic movement on the affected side. (Table 1.) In cases where the effusion was small in amount, the shadow was seen, but comparison with the unaffected side revealed distinct differences. This comparison of the two sides is frequently neglected. It is absolutely essential for accurate work. The rate of excursion should be observed, and the differences in the width of the "excursion zone" should be noted with respect to bony landmarks.

Displacement of organs adjacent to the lungs by the accumulation of fluid in the pleural sacs varies, in frank cases, almost directly with the amount of such effusion. The heart is most frequently

large amount of fluid on the left side with comparatively little displacement of the apex beat to the right. Sometimes, especially in children, the apex-beat is raised into the third or the fourth interspace. It must not be forgotten that the heart may be enlarged by organic disease with a correspondingly displaced apex beat, or the cardiac impulse may be out of its normal relations as the result of adhesions. In universal accumulations of fluid in the serous sacs, the apex beat may be lost. In double-sided effusions, the heart may not be displaced or displaced but slightly, and not in proportion to the amount of fluid on the opposite side. Solid tumors of the thorax may cause displacement of the apex beat, irrespective of pleural exudate. In the majority of my cases of serous effusion there was cardiac displacement. In none of the cases was the liver so displaced as to make it evident on inspection.



The evidence furnished by *palpation* is usually corroboratory. The fullness of the interspaces with loss of the resilient "feel" on the affected side is often striking. Presence of friction was frequently noted in my cases, particularly in those which were acute, and especially at the early stages of the ailment. Absent or greatly diminished vocal fremitus was the rule, over the zone of effusion. To be best appreciated, similar locations on both sides should be simultaneously compared. Change in the distribution of the areas of diminished or absent vocal fremitus with changes in the position of the patient usually conveys suggestive information. Palpation with the edge of the hand often aids in the delimitation of the upper margins of the fluid. It should be remembered that in severe bronchitis, lobar or broncho-pneumonia, or in patients where there is asthenia or pain on speaking, the tactile fremitus may be greatly diminished or wholly absent. The same often obtains in obese individuals. Examination with cold hands frequently gives rise to muscle tremors which may be mistaken for vocal fremitus. In cases where there is bronchitis with abundant exudate or where a pneumonic consolidation is suspected, I find it useful to have the patient cough several times before examining for vocal fremitus. Sometimes directing the patient to cough during palpation will reveal areas of increased fremitus, where absent or diminished fremitus had been previously observed.

The characteristic *percussion note* is flatness. This is sometimes only obtained by the use of light strokes, in cases where the effusion is not extensive or where the parietes are thin. Comparison between symmetrically placed points on the two sides of the thorax generally brings out strikingly the variations in resonance. The percussing finger frequently appreciates a decided increase in the sense of resistance over the

area of effusion. The upper border of the dulness area is often curved in outline, but not always so. The upper line of dulness is usually altered in location on change in position of the patient. This was particularly so in my cases where moderately large serous effusions existed, and more noticeable in recent effusions. In the cases which were distinctly inflammatory, associated with fever, early pain and rapidly developing exudate, adhesions are soon set up and the movable dulness may be difficult to outline. It should also be remembered that cases of interlobar or diaphragmatic effusion may be found where the movable dulness is not detected at all or only with extreme difficulty. It seems unnecessary to mention that with extensive effusion and complete collapse of the lung, the entire affected side may be flat and no movement in the dulness outline made out. This occurred in one of my cases. Thickened pleura, local or general, sometimes prevents the manifestation of movable dulness. This was particularly noticeable in one of my patients. Patients with thick parietes may require careful and repeated examination before alterations in the distribution of the dulness outlines can be determined.

In connection with the percussion findings, I beg leave to call your attention to a but recently emphasized physical sign associated with accumulation of fluid in the pleural sac. About a half dozen years since, Prof. Grocco, of Florence, Italy, in a brief clinical communication, called attention to the fact that where free exudate existed in the pleural sacs, he had constantly observed that a triangular area of relative dulness could be percussed along the spine, *on the side opposite to that on which the exudate existed*. There was also a corresponding dulness over the adjacent vertebræ.

The triangular area of dulness is best appreciated by percussion from above downward, *on the fluid-free side*, along

lines parallel to the vertebral column. The base of the triangle is formed by the lower border of thoracic resonance on the healthy side. The condition is more plainly indicated in Fig. 3. The cause of the paravertebral area of dulness appears to lie mainly in mechanical displacement of mediastinal structures and separation of the resonant lung from the vertebræ adjacent to the effusion, with consequent diminution or loss of resonance over the bodies of the vertebræ, and

neoplasm and in evidently normal pregnancy (the author<sup>12 13</sup>). It is quite likely that in pneumothorax and in certain thoracic tumors triangular dulness may also be percussed along the spine. In lobar pneumonia, mediastinal neoplasms and lung abscesses oblong areas of dulness are frequently made out to the opposite side of the thorax from that on which the pathologic process exists, but unless free exudate is also present, this dulness is rarely, if ever, triangular.

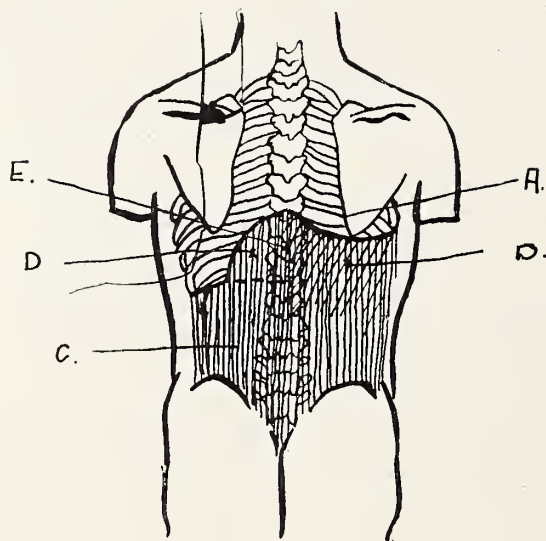


Fig. 3.

To Illustrate the Location of the Paravertebral Triangle of Percussion Dulness in Pleural Effusion.

**Explanation:** A, Diminished resonance above effusion; B, Flatness external to fluid; C, Lumbar flatness; D, Relative dulness, of triangular outline, along spine, on side opposite to that where fluid exists; E, Dulness over lower thoracic vertebræ.

their transverse processes on the unaffected side. With respect to the value of the paravertebral triangle of dulness or "Grocco's sign," since 1902, there has been considerable written in Italian, German<sup>3</sup>, English<sup>4 5 6</sup>, and American<sup>7 8 9 10</sup> periodicals. The findings have been generally confirmatory to those of Grocco, but attention has been called to the fact that paravertebral areas of dulness may be percussed in thoraces where the affection is extra-thoracic: e. g. ascites (Ewart<sup>4</sup>), sub-diaphragmatic abscess (Beall<sup>11</sup>), large cystic abdominal

The auscultatory findings to be mentioned later may be wholly lacking as may also alterations upon change in position of the patient.

Certain details of the paravertebral triangle of dulness are of importance. It may be entirely absent when the patient lies on the affected side; it is usually exaggerated when he lies on the healthy side. The triangle is better made out in cases presenting right-sided effusions than those where the fluid is on the left side. It may not be present in double effusions until one side has

been aspirated. The paravertebral dulness is better made out after the patient has sat up for several minutes. This is especially so in serous effusions. The size of the triangular dulness is usually directly proportionate to the amount of the effusion, but not necessarily so.

renders the diagnosis of fluid highly probable. Where patients are too weak to submit to prolonged percussion of the back, the presence or absence of paravertebral triangular area of dulness may sometimes be rapidly determined and diagnosis indicated.

SUMMARY OF OBSERVATIONS REGARDING THE PRESENCE OF GROCCO'S SIGN IN SUSPECTED PLEURAL EFFUSIONS.

Case.	Diagnosis: Clinical.	Side.	Fluid.	Sign.	Base.	Remarks.
1.	Pleural effusion.....	R.	1000 cc.	+	5½ cm.	Base 1½ cm. after tapping
2.	Pneumonia-pleural effusion.....	R.	0	0	0	No spinal dullness.
3.	Pleural effusion—t. b. c.?.....	R.	100 cc.	+	?	Sign absent after tapping.
4.	Old pleurisy—hydrothorax.....	R.	1500 cc.	+	5 cm.	
5.	Pneumonia empyema.....	L.	500 cc.	+	2 cm.	Interlobar abscess; empyema.
6.	Old pleural thickening—effusion?.....	R.	0	0	0	No fluid after many punctures.
7.	Typhoid fever, broncho pneumonia; effusion?	L.	0	0	0	Several punctures negative.
8.	Pneumonia; pleural effusion—t. b. c.?.....	L.	30 cc.	+	2 cm.	Sign after sitting 15 min.
9.	Pneumonia; pleural effusion.....	L.	15 cc.	+	2 cm.	Do.
10.	Empyema—lobar pneumonia.....	L.	0	0	0	T. b. c. later.
11.	Pleurisy—serous effusion; t. b. c.....	R.	650 cc.	+	4 cm.	No recurrence.
12.	Pleurisy—effusion; pneumonia?.....	R.	725 cc.	+	3½ cm.	Voice changes over triangle.
13.	Pleurisy—effusion; t. b. c.....	R.	30 cc.	+	6 cm.	Not aspirated—Aspirin.
14.	Pleurisy, effusion and t. b. c. of apices.....	L.	50 cc.	+	3 cm.	Exploratory puncture only— Salol.
15.	Pleurisy—serous effusion t. b. c.....	R.	850 cc.	+	5 cm.	Sign disappeared after tapping
16.	Pleurisy—acute exudate.....	R.	200 cc.	+	3 cm.	Sign after sitting up 5 mins.

Sixteen patients comprising the basis of this paper were examined with regard to Grocco's sign. In twelve of the cases where fluid was demonstrated by aspiration, the paravertebral dulness was percussed before exploratory puncture. The details concerning the cases are set forth in Table 2. In the four cases where the sign was not obtained, the presence of pleural exudate was not the predominating feature of the clinical picture. In cases 5 and 13 the discovery of the dulness to the opposite side of the spine was an important point in determining exploratory puncture.

While our series is too small to warrant absolute statements, yet it appears to us that the paravertebral triangle of dulness furnishes an important confirmatory sign in the diagnosis of pleural exudate. Many cases can be diagnosed from other findings, but occasionally there are instances (as those cited) where the sign has distinct value in differential diagnosis. In the absence of extra-thoracic conditions, its presence certainly

The large proportion of our cases of left-sided effusion, where the exudate was serous, exhibited an obliteration of the physiological tympany in Traube's semi-lunar space. This was not always the finding. Where the exudate was small or encapsulated, there was frequently easily demonstrable tympany in Traube's space.

On *auscultation* absent or greatly diminished breathing over the area of the effusion was the rule. Above the line of fluid the respiratory murmur varied from quiet vesicular to harsh vesicular or tubular. Alterations in the quality of the spoken voice were usually obtainable, particularly after the patient had been directed to cough. At and above the effusion limits increased bronchial tones were the usual finding. In many of the cases where serous accumulations were subsequently proven by aspiration, just above the effusion limit and for a variable distance below, the peculiar alteration in the *quality* of the spoken voice, technically known as "egophony"



was manifest. Many observers do not attribute much diagnostic importance to egophony. I, personally, consider it quite as valuable as any single auscultatory finding. When one once gets the "aural picture" of what is really meant by egophony—the peculiar *phonographic* or *telephonic*, rather than *bleating*, quality of the spoken words—its presence with other physical phenomena warrants exploratory puncture. My cases have not shown that the variety of exudate—serous or purulent—markedly alter the degree of voice transmission. The quantity of each kind of exudate, together with the variously related phenomena have to be considered. My cases, in the main, bear out Baccelli's dictum, that the whispered voice is better transmitted through serous than purulent exudates.

A word should be said in respect to the auscultatory findings over the posterior paravertebral triangle of percussion dulness. In my cases where the effusion was of moderate size, and particularly where distinctly serous, I was frequently able to detect absent or altered breath-sounds over the triangle. In two of the cases the respiratory murmur was harsher than over the effusion. Both cases, however, exhibited pulmonary consolidation in addition to pleural exudate. The spoken voice in general resembled that found over the exudate, but distinct egophony was not so frequently made out as over the exudate. The tones were rather pronouncedly nasal than "phonographic." I have never been able to detect metallic whisper as described by some writers, nor have I records of the demonstration of the "coin-sound." Perhaps my list of cases is not sufficiently large.

**Fluoroscope:** It does not appear necessary to emphasize the practical value of fluoroscopic examination of the thorax, inasmuch as in the majority of instances physical signs are sufficiently

evident to warrant tentative diagnosis. Occasionally, as for example, where an effusion is suspected in a patient with old, fibroid pleural thickening, examination with the screen may furnish conclusive data. It should be remembered that only in institutions are these examinations possible, without discomfort to the patient. In active practice, it is rarely possible to carry apparatus to the patient, or the patient to one's office. The same general remarks may be made with respect to the value of *radiograms*. In institutions, one may often secure valuable confirmatory information from the examination of plates made with the subject in successive positions. In doubtful cases, this information should be obtained if possible. The average man has but infrequently these facilities at his command. The bedside diagnosis can usually be made with a high degree of certainty if the patient is carefully examined from the physical standpoint. It has been my constant observation that in plates exhibited as proof of the paramount value of thoracic radiography conditions were such as to make positive the presence of easily demonstrable physical signs, the opinion of "expert" radiographers to the contrary, notwithstanding.

**Exploratory puncture:** This is necessary where the clinical examination is inconclusive or bespeaks more than one possibility. Where the welfare of the patient is the first consideration, puncture should be practiced early. It is by no means the formidable operation that patients and, I regret, frequently physicians are inclined to think. With a little care the procedure causes but slight inconvenience to the patient and yields information of the greatest worth to the diagnostician. This care should be exercised with respect to (a) apparatus, (b) preparation of patient and selection of sites of puncture, (c) technique of

aspiration, (d) disposition of the fluid withdrawn.

(a) *Apparatus*: In my experience, the all-glass syringe, with ground-glass plunger, or plunger wrapped with asbestos-fibre, has proven very satisfactory. I prefer a syringe with a capacity of from 30 cc. to 60 cc. With this capacity, one can secure sufficient fluid for laboratory examination, if it is present. The needle may be attached to the syringe by a piece of stout rubber tubing. This is better than to have the needle screw directly onto the syringe. There is less danger, as a consequence, from sudden movements of the patient, or from interference with unimpeded insertion of the needle into the thoracic cavity. If the needle be less than 6 cm. long, there is always doubt, in negative cases, as to the pleural sac having been entered. This fact should be borne in mind by those who have failed to secure fluid in suspected cases, with the use of an ordinary hypodermic outfit. Needles with a bore of from  $\frac{1}{2}$  to  $\frac{3}{4}$  mm. are less easily clogged, are cleaner, and permit of freer flow of exudate than do those having smaller bores.

(b) *Preparation of patient; sites of puncture*: The skin should be prepared as for any surgical operation upon the thorax, namely, by scrubbing with abundance of green soap and water, and rinsing with alcohol and acetic acid. I prefer to make use of no antiseptic solutions, as bichloride. They interfere with the subsequent examination of the aspirated fluid. The site of puncture is usually in the fifth, sixth or seventh interspaces in the axilla or just below the tip of the scapula, posteriorly, but the puncture-point naturally varies with the situation of the suspected exudate. I find it most convenient to make the punctures with the patient sitting, when this is feasible. Raising the arms above the head helps to widen the interspaces, in some patients. I have never seen

the necessity of puncturing the thorax without the aid of some analgesic, e. g., ethyl chloride or cocaine solution locally. The operation can be performed much less painfully and with more deliberation than when the needle is inserted directly without local analgesis. The ethyl chloride spray is especially useful where multiple punctures are to be made. In choosing the site of puncture care must be exercised in not aspirating too low, else the liver or the spleen may be entered, and a negative result lead to a false sense of security.

(c) *Technique*: The consideration of this may seem unnecessary to the expert, but certain details of the procedure appear advisable. The securing of fluid should not be considered the only end of puncture. The operation permits one to secure more or less definite information regarding the condition of the pleura, the lung tissue and position of solid structure. In order to appreciate these conditions, quick, stabbing, haphazard insertion of the needle can not be practiced, even though so distinguished an authority as Edwards<sup>14</sup> recommends it. If the needle is slowly inserted—and this is always possible under the analgesis—one is permitted to “feel his way,” as it were, and detection of thickened pleura, of airless tissue, whether from consolidated lung or spleen or liver, of fluid or air in the pleural sac is quite possible. The information thus derived is frequently of great importance with regard to prognosis and treatment.

(d) The *aspirated fluid* may be received in a centrifuge tube or a vessel containing one-percent-sodium-citrate-in-normal-saline solution. Its coagulation is thus prevented and microscopic and bacteriological examination may be carried on at leisure. Rinsing out the syringe with the sodium citrate solution or allowing a small quantity to remain therein before the aspiration is begun

will answer a like purpose. Color, specific gravity, reaction, amount of solid constituents and character of cellular elements in the aspirated fluid should be determined. The sediment after centrifugalization is readily examined microscopically by smears made on thin cover slips and stained with Wright's stain. Examination should be made under both low and high powers. Tuberculous exudates frequently exhibit an excess of small lymphocytes. Purulent exudates contain large numbers of polynuclear neutrophile leucocytes (some of these may be filled with bacteria, as happened in one of my cases). In the exudates accompanying new growths, abnormally constituted alveolar cells, with atypical nuclei, may be observed. In hydrothorax, the endothelial elements are generally few but may contain blood pigment. Bloody effusions may occur in new growth, tuberculosis, or embarrassed cardiac action. In actinomycosis, small yellowish-white granular bodies may be present, which on crushing reveal mycelia or club-shaped elements.

Streptococci, staphylococci and pneumococci may be frequently observed in purulent effusions. It is an uncommon event to find tubercle bacilli, even after diligent search. Where there is an excess of lymphocytes in the effusion, a guinea-pig may be inoculated intraperitoneally and post-mortem examination made, if the animal dies. Further information regarding the character of the lymphocyte-containing fluid may be obtained by testing the patient with an approved tuberculin preparation.

It is not my purpose to consider *prognosis* in pleural effusion at length. It varies frequently with the primary cause of the exudate: tuberculosis, new growth, lung abscess, uncompensated heart, etc. Three of my cases died. In these, the effusions were secondary to mitral regurgitation, thoracic tumor, and tuberculosis respectively. The prognosis

with respect to the immediate alleviation of the patient in acute cases, where the process in the pleura is primary, is good. But here again the immediate prognosis should not alone concern us. Extensive adhesions may lead to future injury to both heart and lungs. The value of active and early treatment is thus made apparent.

### TREATMENT.

It is to be supposed that from the consideration of the clinical history and examination of the patient, the primary causative factors with respect to the exudate have been determined. It is presumed that these causative factors are receiving appropriate treatment, curative or palliative. The problems that present themselves, therefore, are: (a) the alleviation of subjective disturbances, whether acute or chronic; (b) the attempt at removal from the pleural sac of accumulations of fluid—infected or non-infected—which are foreign to such locality, and the presence of which may be of immediate or future source of injury to intra-thoracic viscera, generally; (c) the restoration of function to the affected lung; (d) the treatment of complicating morbid conditions.

(a) **The Alleviation of Subjective Disturbances:** In *acute*, infective processes, the pain and consequent dyspnea are usually relieved with promptness by the application of the ice-bag. It should be constantly applied, and may be kept in place by strips of adhesive or bandages. In the case of babies or young children one should watch carefully the effect of the bag on general temperature and the thorax locally. This applies particularly to children who are poorly nourished. I recently observed a fall of five degrees in temperature (per rectum) following the continued application of a large ice-bag to a child eighteen months old. If ice-bags are used carefully, pain and



dyspnea cease within from a few hours to half a day. Strapping the thorax with adhesive strips is thus rarely needed. It may be useful when ice is not obtainable. The local use of dry cups is frequently of more immediate value. The cupping can be conveniently performed with the aid of a small "whiskey glass" and a few drachms of alcohol. The glass is rinsed out with the alcohol, the edges are dried, the alcohol remaining is ignited, and the glass then applied quickly and evenly to the seat of thoracic pain. Several places may be cupped without much disturbance to the patient. Care should be taken to prevent burning with the edges of the glass. The parts can be protected with carbolic vaseline and gauze if necessary.

A Paquelin cautery is frequently of service. It sometimes alarms sensitive patients more than do the cups. If the measures suggested are carried out, morphine, codeine and the like are rarely indicated. Their use may, however, be indicated where the pleural rubbing is inaccessible—as, for example, in diaphragmatic pleurisy. The temperature is rarely so high as to require active treatment. When it is annoying, and but little affected by the ice locally to the thorax, or an ice cap to the head, frequent sponging is of great service. Small doses of coal-tar antipyretics (as phenacetin), or preparations of the salicylates—as will be mentioned later—may be used. Their excessive use may greatly obscure the clinical picture, if persisted in. The cough may require codeine or heroine.

Restlessness and cyanosis are generally relieved by posture, an abundance of fresh air—open windows in zero weather are not contraindicated, if the patient is properly protected, and the examinations are made after the room has been warmed—and careful nursing.

The progress of an effusion can only be accurately determined by careful local

examination. It is well to mark the limits of dullness at least once a day with blue pencil. In acute cases, so long as the fluid is increasing, provided the dyspnea and cyanosis are not extreme, aspiration may be postponed. If done too early, the fluid may again rapidly accumulate, and frequent tappings be required. The automatic factor of accumulating fluid pressing against the air-containing lung as a means of limiting vasomotor dilatation, should not be forgotten in acute stages of effusion. Inasmuch as our chief guide as to the progress of effusion is *frequent local examination*, the folly of incasing the trusting sufferer in an expensive *cuirasse* of stinking clay is apparent.

In *chronic* morbid conditions associated with pleural exudate, attention to details connected with the causative factors and the mechanical relief afforded by diminishing the amount of fluid in the pleural sacs is indicated.

#### (b) Means of Removing and Controlling Exudate:

1. *Medicinal.* Except with respect to pleural transudates, occurring as for example in cardiac or renal affections, it has never been conclusively demonstrated that continued and often violent purgation with concentrated saline solutions or suspensions (Hay's method) diminishes the quantity of fluid in the pleural sacs sufficiently to warrant the inconveniences associated with this catharsis. It is good practice to open the bowel with from two to five grains of calomel, at the outstart of acute cases particularly. A saline purge may be administered the following morning. The bowels may be kept open subsequently with sodium citrate or magnesium sulphate, but huge doses of these are not advisable. Diaphoretics, as pilocarpine, are of uncertain value, and are sometimes dangerous. Diuretics are sometimes of service. It has never been

proven that such of these as diuretin, caffen, squills and calomel, etc., have positive effect, in themselves, upon the effusion. Diuretics of the salicylic acid group have, however, been repeatedly demonstrated to exert a decided influence toward the diminution of serous exudates. Attention was called to this as early as 1883 by German writers (Aufrecht<sup>15</sup>) and since then an increasing literature bears testimony to the clinical worth of salicylates in pleural effusion. The early work of Dock<sup>16</sup> furnishes suggestive information in this respect. The recent treatise of Babcock<sup>17</sup> endorses the use of sodium salicylate "in the formative stage of the exudate when fever is high and pain pronounced." This writer thinks, however, that the drug treatment is of little value after the exudate has accumulated. In the cases reviewed for this paper, preparations of salicylic acid were frequently used, either of themselves or combined with aspiration. In acute, simple serous effusions, the results were generally favorable. A case in point might be cited:

R. P., male, student, age 20. Entered the University Hospital on account pain in the right thorax, of several days' duration. Examination revealed a serous exudate reaching to the third rib in front and the fifth space in the back; Grocco's sign present to the left of the spine, with a base of 6 cm. After the exploratory puncture, the patient was put on aspirin, grains XX, four times daily. He was allowed house diet and moderate quantities of liquid. The quantity of urine passed the 24 hours previous to the beginning of the aspirin was 1000 cc. The temperature ranged from 98.6 deg. F. to 100.8 deg. F. The first 24 hours with aspirin increased the urine to 1250 cc. and the temperature was never above 99.8 deg. F. The third day on aspirin, the urine voided measured 2100 cc. and temperature reached 99.4. The effusion had decreased perceptibly. The second day after the aspirin was started, the base of the paravertebral triangle measured 4 cm.; the third day it measured 2 cm. The patient was discharged at the end of about ten days with small amount of effusion, having

been taken off aspirin four days previously, on account of slight albuminuria.

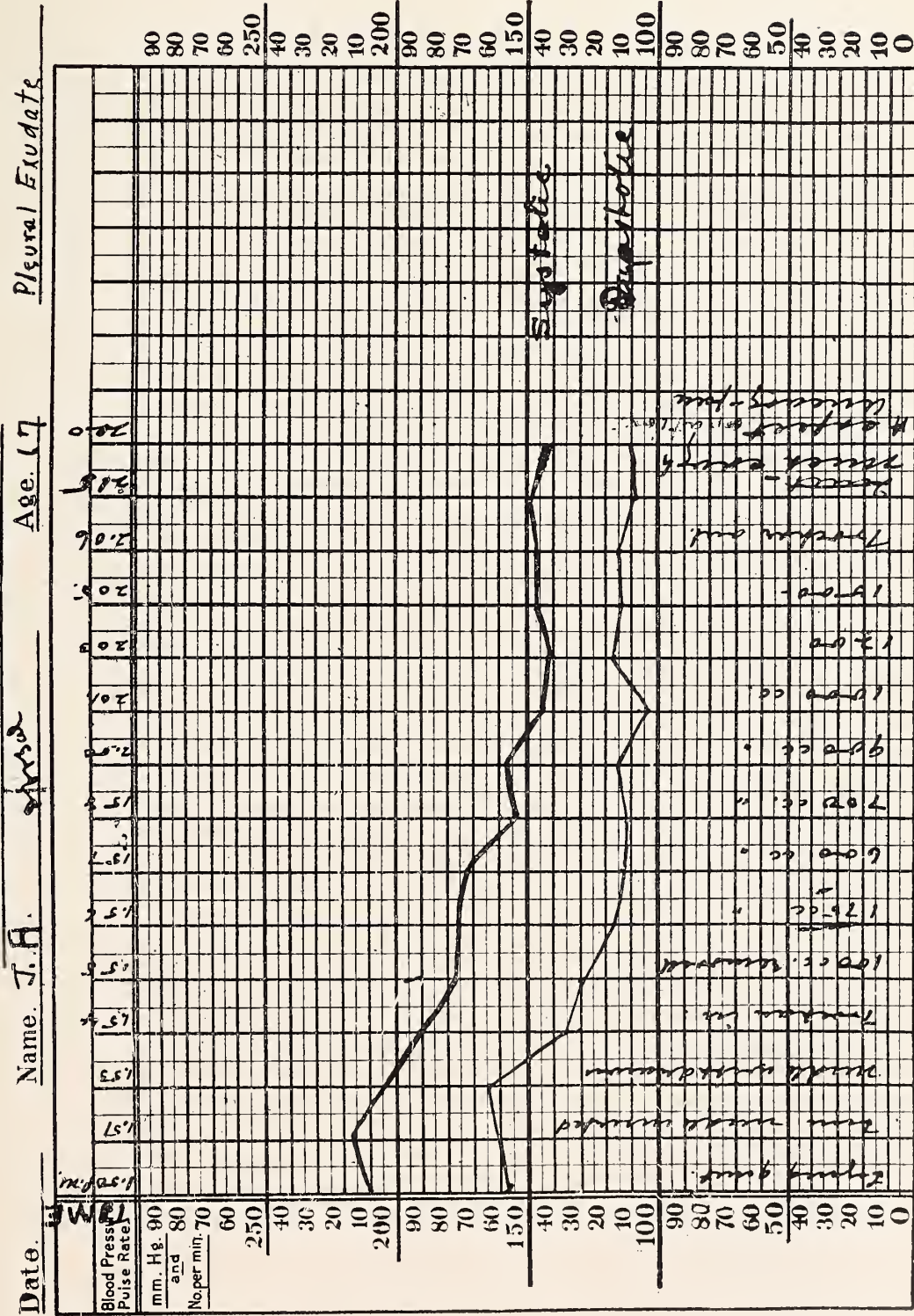
It has not been definitely decided just how salicylates act in pleural effusions. There is little doubt as to their direct action upon the kidneys, but the diuresis produced does not appear in all cases to account for the decrease in the exudate. That the drug is secreted into the pleural sac is proven in Dock's and other papers. The factors concerned with added resorption are not clearly understood. The large doses of salicylates slow the heart and lower blood pressure generally while at the same time they frequently cause acceleration in the respiration. (Cushney<sup>18</sup>). It may be that the alteration in intra-thoracic pressure thus brought about are factors in increasing resorption. It should not be forgotten, that the salicylates are themselves germicidal and that when administered in early acute conditions, may be of efficient aid in controlling the spread of the infective process.

Salicylates appear to be of little value in chronic exudates or in purulent accumulations. Their use is contraindicated if for no other reason than that they may prevent phagocytosis if present in the pleural sacs. Their antipyretic effects may mask slightly septic temperature and allow free spread of the infection before active measures are taken to counteract such. The urine should be closely watched for albuminuria and casts when the salicylates are being administered.

2. *Thoracic puncture:* When the infective agents are pus-producing organisms, e. g., streptococcus, staphylococcus, pneumococcus, etc., and it has been shown that the fluid is not accumulating further or but very slowly, early aspiration should be practiced. By this means, extensive and frequently damaging adhesions are prevented, and the embarrassment both cardiac and respiratory, is relieved. In rapidly accumulating



Blood-Pressure and Pulse Chart.



Showing effects of rapid aspiration of pleural fluid upon blood pressure.



effusions, when the fluid approaches the clavicles, sometimes without much discomfort, prompt tapping should be advised. Temperature is no contraindication.

The most satisfactory method of tapping is to nick the skin, after local analgesis, and insert a trochar of moderate bore. The exudate may be allowed to escape of itself or may be syphoned off or aspirated. A syphon may be improvised from a piece of rubber tubing, that is filled with sterile salt solution before being attached to the trochar, or the double tube syphon may be used, arranged according to the method of Dr. Manwaring, of Flint, Michigan, when in the medical clinic at the University Hospital. Syphonage appears safer than aspiration by means of bottle and pump. The flow of fluid automatically regulates itself and the "pull" upon that in the pleural sac varies but little. With the aspiration pump, the suction constantly varies, and may be detrimental to the patient. Its use also leads to too rapid evacuation of the exudate, with frequently resulting pulmonary edema, shown by albuminous expectoration, paroxysmal cough, and lowered blood pressure. In this event subjective symptoms, as dizziness, faintness or actual syncope, and air-hunger may occur. The evil effects of rapid evacuation are seen in Fig. 4. The patient was a man 67 years old, with an abundant exudate in the right pleural sac. Fifteen hundred cubic centimeters of fluid were removed within fifteen minutes. The blood pressure (measured graphically by the Erlanger apparatus, 12 cm. cuff) rapidly sank from 212 mm. Hg. systolic and 160 mm. Hg. diastolic to 145 mm. Hg. systolic and 108 diastolic. There was a great deal of coughing, bloody and albuminous expectoration, thoracic pain, and partial syncope. At a subsequent session, when 1350 cc. of fluid were removed within a period of nineteen min-

utes, the pressure fell from 158 mm. Hg. systolic and 96 mm. Hg. diastolic to 122 mm. Hg. systolic and 84 mm. Hg. diastolic. There was pronounced, paroxysmal coughing continued for considerable time, associated with symptoms of collapse. Similar observations have been also made by Capps<sup>19</sup>. The facts suggest that dangers of pulmonary edema and cardiac weakness may be anticipated by the careful observation of the blood pressure during aspirations, and that evil effects avoided before cough and expectoration with collapse give unmistakable evidence that the tapping has been carried too far or too rapidly performed.

The amount of fluid that may be safely removed depends upon the primary nature of the effusion. It is rarely necessary to remove all the fluid present—indeed it is doubtful if this is possible. Frequently the removal of a half liter allows spontaneous resorption of the remainder. It would seem that it is a wise plan to allow sufficient fluid to remain to keep the pleural layers separated, and thus minimize the danger from future adhesions. With respect to complete removal of exudate, it might be of value to mention the method of treatment, recently proposed by Sir James Barr<sup>20</sup>.

The so-called *Barr Method* consists essentially in introducing into the pleural sac a quantity of sterilized air or oxygen, approximately equal in bulk to the quantity of exudate removed. Following the removal of the fluid and the substitution by air, four cubic centimeters of adrenalin solution (1 to 1000) diluted with two or three times their bulk of normal saline solution are injected into the pleural sac. (The reader is referred to Barr's original articles for details of the proceeding<sup>21</sup>.) By this method the proposer claims that all the exudate may be safely removed, that the layers of the pleura are mechanically separated by the air or oxygen until the active inflamma-

tory process has subsided, and that as a result extensive pleural adhesions are guarded against, that the adrenalin temporarily contracts the blood vessels of the pleura and aids in preventing edema. While not quoting definite statistics, Barr claims to have used the method with great success. His work has not yet, however, received general confirmation. It would appear, that with a simplification of the apparatus, and attention to details, in the hands of those moderately skillful, and in picked cases, the method may be of considerable advantage over previous procedures. Ewart<sup>22</sup> claims to have had good results following the injection of adrenalin into the pleural sac previous to aspiration. One should be cautious in the too free use of adrenalin, particularly in arteriosclerotics, inasmuch as serious injury may follow to the blood vascular system, as pointed out by Pearce and Miller<sup>24 25</sup>.

After tapping, the patient should be kept quiet and in bed for at least twenty-four hours. It is a serious mistake to allow a patient to be aspirated in a dispensary and then travel homeward. This is particularly the case where considerable fluid is removed from aged subjects. The diet should be nourishing, with a limitation of liquids in afebrile cases, and as nearly salt-free as possible. An accumulation of fluid subsequent to tapping calls for removal. If carefully done, there can be but little if any harm to the lung, but elderly patients, especially if emaciated, stand repeated aspiration rather poorly. This is particularly the case where the cardio-vascular apparatus is at fault.

*Empyemata* are surgical affections, and should be treated as are abscesses in any other part of the body, namely, by free evacuation and perfectly maintained drainage. As will be mentioned later, exercises and bacterial vaccines may be of service.

(c) *Means of Restoring Function to the*

*Affected Lung:* Breathing exercises should be early instituted. Fixation of the lung on the sound side—against the arm of a chair, as suggested by Naunyn—during forced respiration, is of service. The manœuvre should be practiced for from five to fifteen minutes daily, and in the open air when possible. The “blowing of bottles” as recommended by Ralston James of Johns Hopkins University, is of decided value. Gallon or half-gallon bottles, equipped with tight stoppers, are arranged as per Fig. 5, and the patient is directed to transfer the fluid from one to the other by means of blowing through the glass tube, as indicated. The fluid may be transferred from one bottle to the other several times, at from three to a half dozen sittings daily. The patient should be carefully directed to blow after expanding the lungs, and not to transfer the fluid merely by mouth blowing. An erect position should always be insisted upon, and slow blowing is more valuable than the rapid transfer of fluid from bottle to bottle. When possible, the operation should be performed in the open air, or before an open window. Patients lying in bed may have a rubber tube attached to the glass tubing at the bottle mouth, and thus blow without disturbing drainage tubes, etc. Colored fluids may be substituted from day to day for children. I have found that this sometimes encourages and amuses them.

Gymnastic exercises—as bending from side to side or touching the finger tips to the toes—are sometimes useful when the patient is able to stand vigorous movement. Later on, outdoor sports, as tennis, baseball, and swimming may do much to increase the capacity of the more or less atelectatic lung.

(d) *The Treatment of Complicating Morbid Conditions:* These may be neoplastic, tuberculous, or septic. In the event of a *thoracic neoplasm* general measures which will conserve the patient's

strength are indicated in the majority of instances. If the neoplasm be situated in the mediastinum and is well localized, operative procedures may avail in the hands of an expert diagnostician and operator. When the primary factor is a *tuberculosis*, provided the infection is lo-

workers with vaccines, can determine when to repeat the inoculations from a consideration of the clinical history and the local conditions alone. Nor should it be forgotten that without previous evacuation of pus, bacterial injections are of little value. A collection of pus

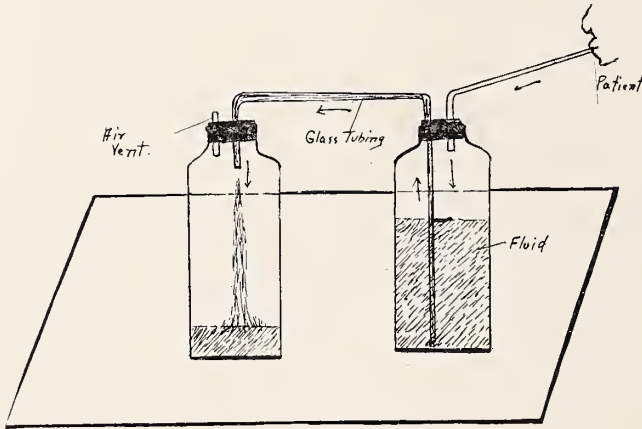


Fig. 5.

Bottles Arranged According to the Method of James.

calized, an attempt may be made to bring about an increased immunity and probable cure by the well regulated injection of old tuberculin. One case, in particular, amongst my series, showed marked improvement following the weekly injection of ascending doses of Koch's old tuberculin. It is well to begin with as small a dose as 1/1000 or 1/500 milligram of TA. The regulation of the increases should be determined by estimation of the tuberculo-opsonic index when possible. If this is not feasible, the doses may be gradually increased at such a rate as always to fall short of a tuberculin reaction, either local or constitutional. When an *empyema* has been evacuated, the cure may be hastened in picked cases, by the injection of appropriate, autogenous bacterial vaccines, according to the method of Wright and others. The injections should be regulated by the opsonic index. It is doubtful whether even the most experienced

can be but slightly affected by stimulation of phagocytosis at its periphery. Concerning the use of "stock" vaccines, supplied by commercial houses, one can only remark that no one has yet proven that they are dependable as curative agents. Vaccines can be so readily prepared from the patient's own germ strain, that there is no necessity for the use of bacterial suspensions which are frequently prepared from attenuated and inert germ growths. One should also remember that, as shown by Stewart and Ritchie<sup>26</sup>, patients the subjects of chronic infections respond much more readily to bacterial vaccines, than do those free from bacterial invasion. The indiscriminate injection of vaccines may in these cases lead to serious consequences.

Sir James Barr<sup>21</sup> suggests that when adhesions are forming or have already taken place, trypsin introduced into the pleural cavity may be of service. His



experimental and clinical evidences are not cited, but the method appears to have possibilities. Sterile solutions of glucose have been recommended by Wright<sup>27</sup> as aids in promoting healing in old sinuses. Their high osmotic

power brings about local hyperemia, with corresponding increase of protective bodies at the infected focus. The simplicity and evident harmlessness of the operation certainly warrant its being tried in selected cases.

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The practical importance and value of obtaining accurate information in regard to cases of tuberculosis, of submitting official reports on such cases, of compiling the data on such reports and of studying statistics is recently shown in the situation in the British Empire. In the war against tuberculosis the Irish have been less progressive than either Scots or English. As compared with forty years ago, the death rates from tuberculosis in England and in Scotland have been reduced nearly one-half; whereas, in Ireland the death rate has increased. This bitter fact has stirred the prominent citizens of Ireland to action. Figures cannot be gainsaid, and looking across the Irish Sea, they have only to learn what intelligent effort as expressed in tuberculosis sanatoria, dispensaries, etc., can do toward the reduction of deaths from this disease.—*Public Health*.

The proposed revival of the State constitution contains a provision of vital importance to public health work in this State. Article VIII, Section

11, reads as follows: "Any county in this state, either separately or in conjunction with other counties, may appropriate money for the construction and maintenance or assistance of public and charitable hospitals, sanatoria or other institutions for the treatment of persons suffering from contagious or infectious diseases. Each county may also maintain an infirmary for the care and support of its indigent poor and unfortunate, and all county poorhouses shall hereafter be designated and maintained as county infirmaries." If this proposed constitution is ratified at the November elections, there is no reason why the work of preventing the spread of tuberculosis should not go on apace. Local antituberculosis societies in the various counties of Michigan will then find their preliminary educational work among the citizens of their respective communities the opening wedge for carrying this constitutional provision into effect. The leverage it gives will ease considerably the burden and pressure now being put upon our one State Sanatorium.—*Public Health*.

## THE LAYMAN OCCUPANCY OF LARGE PATCHES IN THE FIELD OF MEDICAL PRACTICE.\*

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The field of medical practice is the world of disabled human beings; the laborers therein, physicians and laymen. If the former cared for all the disabled, none would remain for laymen, and their "isms" and "pathies" would disappear.

Our knowledge of human disabilities necessarily changes, with the application of scientific discoveries to medical problems. Oftimes, professional adjustment to these changes is slow, as in the discovery of the blood by Harvey, or vaccination by Jenner. Occasionally this professional inertia tempts bright laymen to pick up new ideas of practice, and assume the role of doctor, as in hydrotherapy or electricity. In the development of medicine, one specialty may shoot far ahead of general progress, and lose its normal relations with either teaching or practice, as has ophthalmology. Discouraged in their attempts to utilize such teaching, as given in college courses or medical journals, both students and practitioners drop its pursuit. Shrewd laymen, observing that ophthalmologists cannot reach the great mass of refractive cases, and that family physicians are incompetent, enter the vacant patch in our medical field. Thus the optician is born.

Again, there are periods, in the evolution of some parts of medicine, when the known has not been so formulated or separated from the unknown as to admit of easy comprehension, by either student or family physician, as in mental diseases. This also is left for layman

practitioners, as Christian scientists, faith curists, psychic medicine devotees or Emmanuelists. In these and allied ways, not inconsiderable areas of our medical field are occupied by laymen.

In the past, "isms" and "pathies" have been denounced, with the uniform effect of showing that "the persecution of the martyrs is the seed of the church." Wiser is it for the educated profession to qualify itself for the rational care of all the disabled, when nothing will remain for laymen.

As a step toward this end, at its last meeting the Michigan State Medical Society instructed its Council to take up the cultivation of "limited ophthalmology" with its county societies, if perchance they might find a way, by which the family physician could qualify himself to do the ophthalmic practice now in the hands of opticians. It was also instructed to advise with the State Board of Registration and induce it to establish, in its examinations on ophthalmology, a *definite requirement*, as to *subjects* and the *amount of each*, viz., that each candidate for a license be required to demonstrate his ability to *recognize* and *manage* (1) all *infectious diseases* of the eye, including those of the *uveal tract*; (2) all *injuries of the eye*, except penetrating wounds of the eyeball; and (3) *simple presbyopia*, *simple myopia*, and *simple hyperopia*. This movement will gather strength, as physicians learn that by mastering the proposed "limited ophthalmology" they can retain a firmer grip on their families, add largely to their incomes, and increase their self-respect.

\*Read before the Wayne County Medical Society, January 4, 1909.

Unrelieved eye-patients are easily gathered in by a layman who adds the practice of ophthalmology to the selling of spectacles, diamonds, dry goods or groceries. So important has this layman ophthalmologist become with the people that thirteen states have legalized his practice of medicine, and unless the profession qualifies itself to do the work, he will obtain like legal rights in the remaining states. Disabled, suffering *peo-*

by a physician practicing in a small town amid a rich farming district. A minister of the town, deposed for irregularities, left home for a couple of weeks, and on his return announced his ability to treat eyes, headaches, indigestions and other ills by glasses. Shortly the doctor's patients began to tell him of the minister-doctor's wonderful success in furnishing them relief after he had failed. Meantime the optician's prosperity was at-



Fig. 1. Graphic representation of areas occupied by laymen in the field of medical practice.

*ple must be relieved*, by laymen if *educated* physicians are *unavailable*. In their journals, the opticians laugh at our educated profession for *neglecting its golden opportunity* to retain within itself *refractive ophthalmology*, worth yearly hundreds of thousands of dollars and more in the making of better physicians with larger influence.

Illustrative of its practical bearings are the following incidents told the writer

tested by improved dress and habits of living, while the doctor's families unconsciously came to regard him with less respect, because a layman with only two weeks' professional education could give them relief where he failed.

Later a young farmer, observing the minister's success in medical practice, dropped his hoe and followed his example. His first patient was the local banker, a simple high myope, and his



results were widely trumpeted by the banker as better than those of a well-known specialist in a distant city—an advertising that gave the farmer a prosperous business.

These observations jarred the doctor, because laymen after a pupilage of but a couple of weeks were able to practice medicine and take patients from families which he had failed to relieve, so disturbing their confidence in his ability to meet all their needs. He concluded that his college training was so defective at this point as to cause him both professional embarrassment and financial loss, and at once set about supplying the defect. Now he is able to do the work formerly done by opticians and they have engaged in other pursuits.

"OSTEOPATHY-MASSAGE." That massage is able to favorably modify many morbid conditions has long been known, but no medical school equips its students with the power to use it in actual practice. Shrewd laymen, observing an unworked gold mine, exploited this therapeutic agency, founded colleges to teach it, and induced legislatures (and among them the Michigan state legislature) to grant them the legal right to practice medicine. Vast crowds of influential people were attracted by its claims, and testify to its benefits. All this made serious inroads into family practice, discredited the medical man, reduced his income, and lowered the profession in popular esteem.

To clear up this neglected patch in the medical field it is necessary, among other things, that the profession, (1) make an exhaustive study of osteopathy and separate the wheat from the chaff; (2) teach the family doctor that which he can use with advantage to his patients; (3) induce registration boards to require of applicants for license a "family physician" massage. Then the medical colleges will train their students in the same and the specialist colleges equip

their students with unlimited massage.

CHRISTIAN SCIENCE, FAITH CURE, PSYCHIC MEDICINE and allied fads, dealing with mental phenomena, managed by laymen, have an immense following. These treat persons more or less disturbed by mental or moral conditions which the family doctor is unable to either recognize or manage. Shrewd laymen, discerning here a "neglected" spot, boldly began its cultivation, each in accord with his own methods, with results everywhere in evidence. The family doctor of the future must be a *psycho* as well as a chemico- and biogico-therapist, so that he will have such mastery of the patient's mentality that the ground will slip from under the feet of the Christian scientist and other healers who now thrive upon the ignorance of mankind.

To deal intelligently with the existing situation, it is necessary that an exhaustive study be made of these morbid mental phenomena by persons commanding general confidence; that they sift fact from fancy and make a *digest* of what is available for the work of the *family physician*; that this be required by state boards of license and taught in the medical schools. Beyond this stretches the field of the unlimited psychiatrist to the greatest possible achievement.

DISEASES OF THE TEETH were once studied by medical students and treated by the family physician. I have seen teeth perfectly healthy that had been filled more than fifty years ago by Dr. Douglas Houghton, the pioneer geological expert of the Michigan iron and copper regions. After his day the schools failed to teach and doctors to practice dentistry, leaving the spot open for cultivation by laymen of a mechanical turn of mind. These now practically control the teaching and practice of dentistry, rarely entering upon their work through a medical college. They have their own journals, colleges and societies, quite di-

forced from the medical profession. Many of them treat the sinuses adjacent to the nose and diseases of the jaws outside from the teeth. Meantime the family doctor is quite incompetent to understand, much less manage wisely, the beginnings of oral disorders. The after lives of the babies whom he guides into the world would be far more normal if he were able to catch the first symptoms of oral abnormality and manage it rationally. The real secret of holding families is the doctor's ability to *satisfactorily manage all their ills*.

Time forbids the discussion of other neglected spots in the field of medical practice. It remains to suggest some of the principles indicated for determining the best methods in their study and the measures needed to promote their culture by educated physicians.

We must ascertain and study the facts in each patch, and discuss them, as individuals, county, state and national societies, that we may learn the wisest modes of procedure.

Such study will make evident that we must have two classes of doctors; *one*

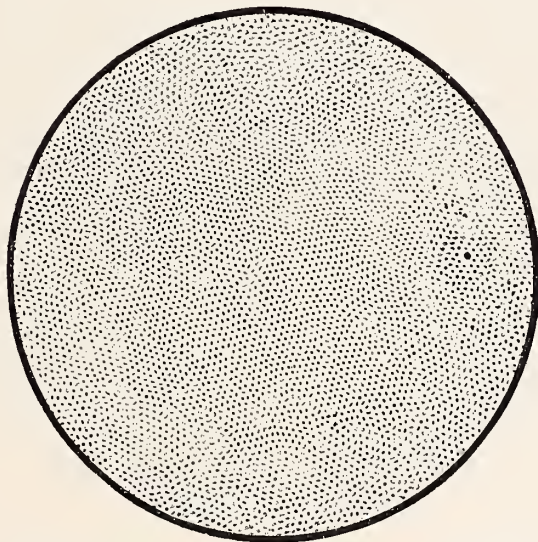


Fig. II. The field of medical practice as it should be. By proper training physicians could cover the whole field, leaving none of the areas represented in Fig. I.

By its organization, the profession can study out the best methods of regaining this neglected spot, determine what topics in dentistry and how much of each the student of general practice could master, and the family doctor practice, without disturbing the rest of their work. This the State Registration Board could require and the medical schools teach. Necessarily it would be a "limited dentistry"—to be supplemented by a special or unlimited dentistry.

able to recognize and manage all simple diseases and the beginnings of the more complex; the *other* able to recognize and manage the more complex to the limit of existing knowledge. The co-operation of these will leave no "neglected spots in the field of medicine," in which "isms" and other groups of laymen-practitioners may thrive.

A little observation will show that few general practitioners now exist; we find



no medical college training students to recognize and manage all simple disabilities and the beginning of the more complex. Nor do we find that licensing bodies, text books or medical journals encourage the evolution of the "family physician," but rather the "unlimited physician" or specialist. Everywhere we find the training and practice of these

classes of medical journals, two classes of licenses to practice. The first class of physicians will be the "family doctor," prepared to recognize and manage all simple diseases and the early stages of the complex as they arise in his families, just as he did fifty years ago, only far better. The second class of physicians will be the specialist or "unlimited phy-

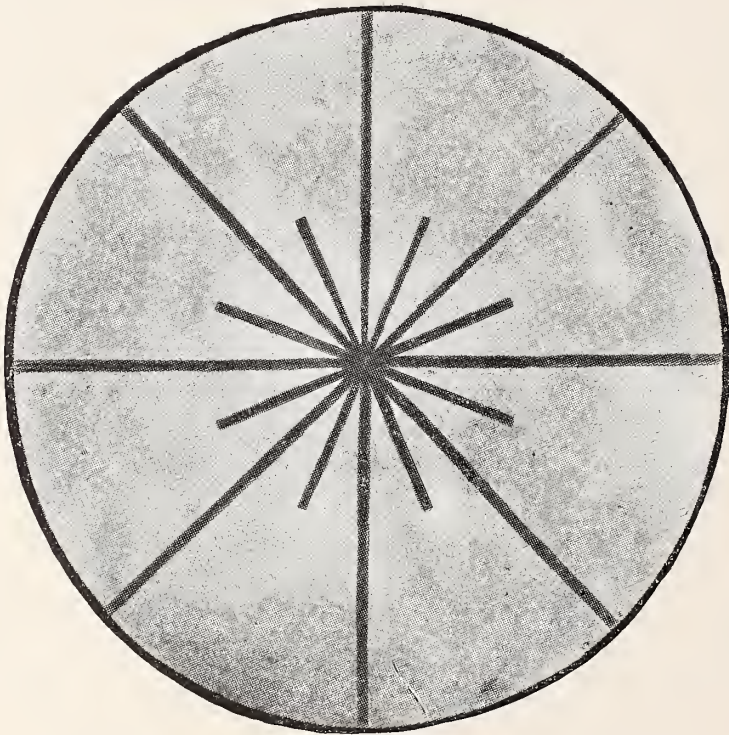


Fig. III. The two classes of medical practitioners in the field of medical practice. The circle represents the whole field. The radii represent the different departments of medical knowledge (specialties). Every physician should have knowledge in every department extending a certain distance toward the periphery, as represented by the short radii. In each specialty there must be physicians whose knowledge of that specialty extends to the periphery; *i. e.*, their knowledge must include all that is known.

As knowledge advances the circle becomes larger, and the line representing the knowledge of the specialists must lengthen in order to reach the periphery. As medical education improves the knowledge of the family physician in all departments becomes greater and the short lines also increase in length.

two classes of doctors hopelessly mixed, a condition that followed such vast increase of medical knowledge during the past half century that no one person could master, much less practice, it. To adjust ourselves to this condition we need to recognize two distinct classes of physicians, two classes of medical colleges; two classes of text books, two

classes of medical journals, two classes of licenses to practice. The first class of physicians will be the "family doctor," who will be able to pick up the diagnosis and management of such complex cases as are beyond the "family physician's" skill. The training of the "family physician" may be met by dropping from the present medical college courses all that belongs to the specialist or "unlimited physician" and adding such courses as are now neglected, mak-



ing all more nearly like the actual practice of his future.

The needs of the "unlimited practitioner" or specialist call for the development of a special class of medical colleges equipped to take up the training of a graduate "family doctor" in a particular class of study and practice, and carry it forward to the limit of existing knowledge, so that specialist practice will be able to perfectly supplement family doctor practice in the special class of cases he has studied. If this class of specialist medical college were established it would be easy for the existing college to drop its special instruction and devote itself exclusively to the needs of the family physician.

In the equipment of the general practice college the materials for its didactic, demonstrative, clinical, and laboratory training would be selected for the needs of the family physician; in the specialist college all these would be adjusted to the needs of the specialist. In the general practice college the teaching would be limited to the mastery and using of facts; in the specialist college, theories and experimental practice could be exhaustively considered. In both colleges the student should have as much experience as possible with the actual management of cases, make the examinations, direct the treatment, do the operations, and under his teacher be responsible for results.

It is not expected that these and allied changes can be effected in a year, but it is the function of the county, state, and national societies to effect such changes as will provide for the intelligent management of every form of human disability by educated physicians.

#### SUMMARY.

1. The field of medicine is the world of disabled human beings.

2. This field exhibits many large patches, neglected by educated physicians (in whole or part) and cultivated by laymen.

3. The existence of these patches restricts the highest usefulness of the profession; is an open confession of either its inability or unwillingness to cultivate its entire field.

4. Organization makes possible such exhaustive study of these neglected spots as will reveal the best methods for their removal and develop the force needed for its accomplishment.

5. Even now it is evident that the family doctor is the only agent by which these neglected patches can be redeemed to intelligent medical practice, by which the specialist can be introduced to those classes of cases which he alone can wisely manage.

6. The limitations of human capacity compel the elimination from the training of the family physician all special training and the restriction of the specialist to the management of one class of cases; the family physician guides the beginning, the specialist the ending, of the more complex cases.

7. If we eliminate all things unnecessary for the work of the family physician from his training, there would be plenty of time for his mastery of such knowledge as would enable him to do the general practice in our neglected patches.

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## NERVE INVOLVEMENT IN FRACTURES OF THE EXTREMITIES\*

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The bones of the extremities are in more or less intimate relations with nerve trunks, so that fractures or dislocations may easily subject such nerves to injury. The lesions resulting may be immediate—due to contusion, laceration, or division—or remote, due to compression by cicatrix or callus. The nervous phenomena thus produced are described in ordinary neurological treatises under *traumatic neuritis* and *traumatic paralysis*, but their particular relation to fractures, as regards mode of occurrence, onset of symptoms, pathology, prognosis, and treatment, is not described in detail, and it is only by a search of separate monographs that such information is obtainable. Scudder's and Stimson's textbooks on fractures contain only occasional mention of nerve complications, and none of the surgical systems brings the surgical and neurological data into convenient relationship. Of course, the fractures of the spinal column and the consequent cord involvement are well studied, and the literature is rich in these references. But the vast majority of fractures encountered by the practitioner are of the extremities, and it is the nerve involvements following these which need to be studied more thoroughly.

**Frequency of Occurrence.**

It is impossible to state in figures how frequently nerves are injured at the time of fracture. It is, however, fair to say that the accident is comparatively rare; every one will probably be able to recall one or a few instances in his experience; seldom will a man however, outside of a large hospital clinic, see many cases.

The complication, rare as it is, occurs far oftener in the upper than in the lower extremity. The musculo-spiral nerve is injured by fracture oftener than any other, and indeed constitutes 40%, according to von Bruns, of nerve injuries accompanying fractures. Injury to the brachial plexus, frequent as it is from forcible twists of the head, from crutches, and from antepartum or birth accidents, occurs but seldom from dislocation, and still less from fractures. Fractures about the elbow joint and in the forearm produce rather frequent traumata in the ulnar, radial, and median nerves; fracture of the internal condyle is especially likely to involve the ulnar nerve. I have found no reference to injury of the sciatic by fracture, but Stimson refers to two cases involved in dislocation of the femur. The anterior tibial nerve has been injured in fractures of the leg, but on the whole the nerves of the leg seem not to be very liable to injury, despite the great frequency of severe fractures of the tibia and fibula, with great laceration of the soft parts. This immunity is probably due to the anatomical relations, which afford the nerves a softer bed of muscular tissue.

**Mode of Occurrence.**

In immediate traumata of nerves accompanying fractures the causative agent is such as to produce most frequently contusion or laceration; when the agent is directly applied, as in a blow, the nerve may be forced against the bone and jammed during the instant of con-

\*Read at the Manistee meeting of the Michigan State Medical Society, June, 1908.

tact, or it may be lacerated. Or the fragments of bone may bruise, stretch, or tear the nerve, even in fractures from indirect violence. These accidents rarely, however, produce complete division of a nerve; division occurs mostly from perforating or incising agents, as from fire-arm missiles, or cleaving instruments—axes, cleavers, saws, etc. These accidents introduce the complications of open wounds and it is often possible in treating such wounds by modern methods, to ascertain by direct examination the nature and extent of the nerve injury.

### Pathology.

The pathology of a contused nerve consists of more or less necrosis of the nerve fibres, with hemorrhage into the sheaths and leucocytic infiltration. The continuity of the fibres is not interrupted and hence regeneration is rapid and function is quickly restored. The time required is from a few hours to ten or fifteen days, depending upon the severity of the contusion. In laceration there is a partial division of the nerve—that is, a division of several fibres, with a necrosis of the severed ends and the same exudative phenomena as in contusion. The intact fibres, however, serve as a guide for the regeneration of the severed fibres and usually complete restoration is accomplished. This may require from a few weeks to many months, according to the extent of the laceration. When a nerve is completely severed, both ends retract, and there is degeneration of the distal portion; the proximal portion tends to spread out in a brush shape, the sheaths proliferate, connective tissue forms, and if this process is pronounced, we have the nerve bulbs or neurofibromatous nodules which so often occur in amputation stumps. The cut ends of nerves, when once retracted, will rarely, if ever, become connected and continuous again without surgical intervention. But the axone of the distal portion

probably retains its integrity for a long time, so that when neuroplasty is done, even months after division, it sometimes promptly regains its function, and nearly always does sooner or later. A consideration of the method of nerve regeneration would lead into a field that is still subject to dispute; some claim that the axone regenerates only from the central end, and is dependent upon its parent cell in the central nervous system; others insist that an axone is developed in the distal portion by the activity of the neurilemma cells, and is ready to assume its conductive powers as soon as it is united with the proximal portion of an axone. It is idle to examine this dispute now, for the practitioner can be content with the clinical facts as they are known.

### Symptoms, Diagnosis, and Prognosis.

Injuries to nerves, associated with fractures, may occur at the time of the trauma or else may be produced by violent and unskillful efforts at reduction. In either case the symptoms ensue immediately. On the other hand, nerve complication may not exist until reparative changes occur and then a nerve may become caught in cicatrizing tissue or in bone callus. This results in compression, whose manifestations are slow in onset.

The symptoms due to complete division of mixed nerves are paralysis and anesthesia. The muscles supplied by the divided nerve may be entirely helpless, or they may preserve a portion of their action because of partial innervation by branches from other nerve trunks; sometimes their impairment may be concealed by the substitute action of other muscles. Usually, however, muscular paralysis is very evident. The anesthesia includes a loss of the sense of touch, temperature and pain; there may also be paresthesia, with sense of numbness, tingling, or prickling. The area of anes-



thesia is often less distinctly delimited, because the overlapping and anastomosis of sensory fibres is more complex than of motor fibres. These symptoms, of course, occur at once after the nerve is severed, but other symptoms may ensue later, such as atrophy of the paralyzed muscles, trophic changes in the skin, producing a peculiar glossy appearance, atrophy of the hairs and nails, and occasionally inflammatory changes, such as herpetic eruptions, ulcers, and abscesses. Joint lesions occur, resulting in swelling, stiffness and ankylosis.

When the nerve trunk is lacerated—that is, only partially divided—the symptoms partake of the above mentioned character in proportion to the severity of the lesion. Trophic changes are less frequent, because the tissues are still partly innervated, and regeneration of the affected fibres is comparatively rapid. The same is true of contusions.

The symptoms due to later nerve involvement in calluses commence with paresthesia, hyperesthesia, and muscular twitchings; these are followed by anesthesia, cramps, paralysis, and trophic changes.

The occurrence of nerve lesions with fractures may readily be overlooked by both patient and physician. Routine examination of nerve function is not customary, and the impairment of motility, as well as the numbness, may not be remarked by the patient, because he considers it the natural accompaniment of a broken bone. The physician directs his attention to reduction and application of suitable retentive apparatus, and when this is done, paralysis is effectually concealed. This is the reason why nerve injuries are often not at first detected; at subsequent dressings however, if the patient complains of disturbances of sensation, which is the subjective symptom most often first mentioned, an investigation should be at once made. There should be close questioning as to

sensation, tests by a pin or knife point, heat and cold, and muscular movements should be ascertained. This latter is often difficult, if not futile, because a few days' retention in splints usually inhibits movement, at least temporarily.

Of the greatest help in determining the nature and extent of nerve injury are the electrical reactions; if the so-called 'reaction of degeneration' is present, it is conclusive evidence of serious nerve lesion and influences prognosis and treatment. The faradic excitability of a nerve section disappears in three to eight days, the galvanic irritability in three to six weeks. Both the qualitative and quantitative changes should be noted.

When nerve injury is suspected then, a diagnosis should be made as accurately as possible of the nerve involved, and the nature of the lesion—whether contusion, laceration, or division. In simple fractures a complete division is the exception, and laceration probably the most common. The diagnosis is reached by the familiar tests of sensory and motor functions and the electrical reactions. If one is in doubt, a consultation is advisable, for a correct diagnosis, and the prognosis entailed by it, will do much to appease the patient, determine proper treatment, and prevent a lawsuit. The prognosis depends closely upon the degree of nerve rupture and the time when it is ascertained; an injury immediately recognized and treated will mend in weeks, whereas an injury not detected till a fortnight after fracture may require as many months. In general the remote prognosis is good; serious blunders of omission and commission may be rectified months after the injury, although with increasing difficulty.

### Treatment.

The treatment of nerve complications in fractures falls under various heads.



**Fig. 1.**

X-ray photograph (Dr. P. M. Hickey) of left forearm, a few hours after injury, showing two fractures of radius, and comminuted fracture of ulna. The lower radial fracture probably was the seat of nerve injury.





**Fig. 2.**

X-ray photograph (Dr. W. E. Blodgett), four months after injury, showing bony union of all fractures, perfect alignment of ulna, poor alignment of radius, but the normal distance between the two bones. The silver wire good. Notice the atrophy of lower end of radius and ulna, parted some time in the third month. Functional result



Prophylaxis may find a place here, for although we can hardly prevent an injury to a nerve at the time of fracture, one can remember the possibility of harming intact nerves by violent or ill-directed efforts at reduction, either in dislocations or fractures. One can also remember the possibility of a nerve being caught in a callus, if good approximation is not obtained and kept. Here, too, should be considered the splint paralysis, from too tight application of dressings—resulting in the “ischemic muscular paralysis” and the Volkmann’s contractures, which are a peculiarly unfortunate form of fracture complication. The physician cannot too carefully avoid undue compression by splints and bandages, and he should, therefore, see a fresh fracture daily until the swelling decreases.

Contused nerves will usually recover while a fracture is knitting, by the enforced rest of the parts, the warmth, and the natural efforts at repair. If not, massage, electricity, and heat will usually effect a cure. Mild or moderate lacerations will also respond to the same treatment. When, however, a nerve is severely lacerated, giving symptoms of considerable paralysis, and always when complete division is diagnosed, operative interference is indicated. If it cannot be done in one’s own surroundings, the patient should be sent where it *can* be done. The danger of lost function consequent upon these injuries is too great to warrant hesitation or expectant treatment. It is of great advantage, when serious nerve involvement is discovered in the first week, to operate at once, suturing not only the nerve, but the bone too, if the case is adapted for it. Once in a while the operation will reveal not only the laceration of a nerve, but its detention between bone fragments. The operations of neuroplasty are now well developed and their successes are among the most con-

spicuous advances in modern surgery, so that early suture almost assures restoration of function. If the nerve injury is not discovered till later, operation is still indicated; indeed it is hard to state a limit of time, when neurorrhaphy will not do good; cases of cure are reported, where the operation was undertaken several years after injury. These cases are of course correspondingly slow in recovering. When compression by callus or cicatrix occurs, an operation must be undertaken to liberate the nerve; sometimes it has to be chiselled out of solid bone. Plastic work is seldom necessary in these cases, since the liberation alone usually results ultimately in a resumption of function.

It might be well to reiterate the liability of nerves of the upper extremity to be involved in fractures of the humerus, radius, and ulna; to repeat that the musculo-spiral nerve is not infrequently injured in fractures of the lower two-thirds of the humerus; and to offer Woolsey’s suggestion that in all fractures of the humeral shaft the functions of this nerve be tested. It might also be in place to suggest that the ulnar nerve be examined in fractures of the internal condyle. Careful reports of cases by any one who has them would enrich the literature of this subject, and of particular interest would be the report of involvement of nerves in the lower extremity, on account of their great rarity.

#### Case Report.

Mr. J. K. was referred to me on Aug. 10, '07, for injury to the forearm, sustained that forenoon in a belt and pulley of flour-milling machinery. The left radius and ulna were broken; an X-ray plate showed a fracture of the radius at junction of middle and lower third, with slight over-riding; a fracture in the upper part of the middle third of the radius, evidently subperiosteal, without any displacement; and a comminuted fracture of the ulna in the middle third, the radius. (See Figure 1.)

The forearm was put up in anterior and pos-

terior splints in semipronation, with a minimum of manipulation. Operation to suture the ulna was advised on account of the probable impossibility of keeping the ulnar fragment away from the radius, and a resultant impairment of rotation. Both bones being broken, neither one could be used as a splint to the other. During the next two days the patient had considerable pain, and complained especially of pain and prickling in his fingers.

Four days after the accident I did an open fixation of the ulnar fracture, removing the comminuted-fragment, and suturing with silver wire. Convalescence was rapid, the wound healed by first intention, and there was no pain in the arm. The annoying sensations in the fingers, however, persisted; they were limited to the thumb, index, and middle fingers, which were anesthetic to a pin-point; this anesthesia on the flexor surface extended up to the palm, but on the extensor surface only just beyond the first phalangeal joint. These fingers were limited in their flexion. This condition pointed to an involvement of fibres of the median nerve, probably caused by severe compressive action of belt and pulley at the time of injury. The fibres were evidently severely contused, perhaps lacerated; prognosis favorable.

Two weeks after operation massage was begun. The fingers already showed slight trophic changes,—a perceptible glossiness, flattening of the pulp, and accentuation of the furrows on the flexor side of the joints. A week later the subjective symptoms were less annoying, and tests with a pin showed hyperesthesia at the margins

of the previously paralyzed area. The improvement was accelerated when the splint was reduced, and when bony union permitted of its daily removal. The paresthetic sensations diminished, and normal sensation returned slowly; on Oct. 9th all retentive dressings were finally omitted, union being firm; at this time the motor paralysis showed in an inability to flex the fingers on the palm.

By Dec. 21 sensation had returned almost to the tips of the fingers and he could close the fingers, making a fairly tight "fist." The treatment had consisted of professional massage, daily hot and cold water douching and olive oil rubbing at home, and especial care to keep the arm and hand warm, with passive and active movements.

The functional result of the fractures was perfect; he had complete flexion, extension and rotation, with undiminished power. The anatomic result was imperfect in the lower radial fracture, as the fragments united in an overriding position. (See Figure 2.) This was appreciated during the week after operation, but it was deemed unwise to disturb it, on account of the strain on the sutured ulna. It would have been a more thorough procedure to wire both bones, doing the radius first.

The prolonged time of healing and the impaired function attending multiple fractures of the forearm suggest the advisability of employing the open fixation method wherever it is possible. Osseous suture requires special technic and the best operative facilities, and should not be attempted if these conditions are lacking.

### What Everybody Ought to Know About Smallpox.

That smallpox, variola, varioloid, swine-pox, Cuban itch, elephant itch, Philippine itch and the "bumps" are one and the same thing.

That it is caused by a germ, or microorganism, or microbe, or "bug," if you please, and that only. It is never caused by filth.

That it does not generate spontaneously, but that each case comes from some other case.

That it does not travel through the air, but that in order to contract it, one must come in direct contact either with a case of smallpox or bedding, clothing, or some material that has been in contact with the patient.

That a severe case may be contracted from a mild one, or conversely, a mild one may be contracted from a severe one.

That both sexes, all ages, and all races are susceptible to the disease.

That there is no known way to prevent pitting except to prevent the disease altogether.

That the eruption is usually worse in the face, especially across the middle zone, so that when pitting occurs it is apt to be there.

That smallpox is a preventable disease—no man, woman or child need have it that chooses not.

That vaccination is the only known safeguard against it.

That vaccination does not merely make the disease milder, but *prevents it altogether*.

That in a few cases, however, one attack of smallpox or one successful vaccination produces only a partial immunity, and that in such case the individual may subsequently contract smallpox or be successfully vaccinated again.

That the only way to know that you will never have smallpox is to be vaccinated again and again till it will no longer take. When thus immunized, one may eat with it, sleep with it, or live with it, with absolute safety.

## THE DIAGNOSIS AND INDICATIONS FOR TREATMENT OF CHOLECYSTITIS\*

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There is no surgical problem which has advanced more from the observation of disease in the living body than cholecystitis. Thirty years ago it was thought to be the physician's duty to be in constant attendance in the autopsy room and make studies of the end results of various diseases. This elementary study is not to be compared with that which may be obtained in the operating room. Unfortunately the operator is not in the best position for observing and drawing conclusions from his findings. Too often he has not observed and studied the patient sufficiently previous to his operative adventures. The symptomatology of the disease must, after all, be the basis of good clinical observation. The removal of the abdominal wall only gives a deeper insight into the origin of the symptoms and makes an earlier interpretation of their significance valuable in subsequent observation.

In order that we may consider the diagnosis of cholecystitis, it is desirable for us to first study the physical elements involved in this disease. We have to deal with a viscus which occupies a position behind the edge of the liver, in front of the pylorus and duodenum, and in contact with the gastrocolic mesentery and the colon, all situated in the upper right-hand quadrant of the abdomen. The gall bladder itself is composed of a serous or peritoneal coat which is made up of pavement epithelium with large lacunæ between them. This

epithelium lies on a basis of connective tissue, in contact with which there are two layers of muscular fibers, radiating in figure of eight fashion over the gall bladder, and coming together in striæ to form the valves of the cystic duct. Immediately below and covering the muscular elements is a redundant mucous membrane, filled with mucous glands, which constantly secrete a clear viscid substance to the interior of the gall bladder. The most important element in an anatomical light in the establishment of cholecystitis is the cystic duct. This duct is made up of a series of valves known as the valves of Heister, which are spiral in form when viewed in a longitudinal section, the valves being the muscular striæ growing out of the bands covering the fundus of the gall bladder and concentrating in a spiral at the common duct. From the gall bladder it is impossible to pass through these valves of Heister a bougie, a stream of water, or air, or even a slippery elm sound when these valves are in their normal condition, but after their obliteration by disease such a manœuvre is often possible.

While the appendix is a simple mucous sack similar to the gall bladder, its outlet is guarded by a single valve, the valve of Gerlach, and it is in the immediate neighborhood of no important structure except the iliocaecal valve. The bladder and right ureter lie near it, and in the opposite direction the iliac vessels pass at nearly a right angle. In the female the ovary is not far off. The

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lymph glands which fill the appendix are tributary to those larger lymph glands in its mesentery. Its blood supply comes from a branch supplying the adjacent ileum. Thus it will be seen that anatomically the vicinage of the appendix is simple compared with that of the gall bladder.

The appendix is a simple sac separated from the cecum by a single valve. On the other hand the gall bladder is a simple sac connected with the first portion of the duodenum by a spiral duct, a portion of it supplied with a complicated series of valves and the second portion a peristaltic duct two inches long, opening into the duodenum by a complicated valve in an ampulla of which the duct of the pancreas discharges itself.

The valve of Gerlach has but two functions—to prevent the entrance of the fecal matter of the cecum and allow the discharge of the secretions of the mucous membrane of the appendix. The valves of Heister must permit the stream of bile from the hepatic duct during the intervals of digestion to enter the gall bladder, and at other times prevent its passage and even expel it from the gall bladder into the common duct.

The appendix is in a neighborhood free from vital or essential organs, and almost at the end of the intestinal tract. The gall bladder, on the other hand, lies directly across the pyloric end of the stomach and often of the pylorus itself. It is in contact with two portions of the duodenum, into the first of which it discharges its contents through the cystic and common duct. It is covered by the liver and is in intimate contact with the outlet of the little peritoneal cavity. It touches the colon and often the pole of the right kidney.

The region of the appendix is disturbed only by the peristaltic activities of the intestines, and the deeply covered

ureter. The gall bladder, however, is not only in intimate contact with the constantly moving stomach and duodenum, but it is in constant motion between the liver and the pylorus with each inspiration and expiration.

The liquid elements which enter into the production of diseases of the gall bladder are far more complicated than those of the appendix. In the appendix we have to deal with the mucous secretion of that organ alone, while the gall bladder offers at least two others besides its own secretion. These are the tides of normal bile and the unusual tide of bile containing the secretions of the pancreas.

The pathological elements which must be considered in cholecystitis may be resolved into two: first the biologic or parasitic invasion or infection, and second, the deformities or other results of inflammation. It is well recognized that the common duct in health is free from parasitic invasion. There is, however, a stream of microorganisms passing the pylorus and passing forward through the duodenum by a peristaltic action of that irregular and powerful duct. It is not unlikely, therefore, that the tide of bacteria passes now and then, especially in the course of disease or in individuals of low resistance, backward and forward through the valve of the common duct and reaches under favorable conditions even the entrance to the cystic duct.

Clinically we know that cholecystitis develops in the course of every septicemia. A microbic hepatitis is attended by the appearance of casts from the smaller ducts of the liver and these casts contain the microorganism of the septicemia; thus in pneumonia the pneumococcus, in puerperal septicemia, the streptococcus. But the gall bladder may be invaded by the advance of the colon bacillus from the duodenum.

The symptoms of cholecystitis depend upon the pathology and the anatomical

location of the viscus. The symptoms may be divided into the general or constitutional and the local. Or into the subjective which are recognized and reported by the patient, and the objective which may be observed and measured by the physician. A part of the constitutional symptoms are subjective and a part objective, and the same may be said of the local symptoms. The general and constitutional symptoms of cholecystitis are not like those of infection in the appendix, the Fallopian tubes, the posterior urethra, the pelvis of the kidney, or the sinuses connected with nose and middle ear. In the acute stage they are recognized by the word sepsis, while in the chronic stage they are more apt to be termed toxemic. In the acute stage there is fever, tachycardia, chills, leucocytosis and often evidence of nephritis. In the chronic stage the toxemia is manifested in mild leucocytosis, asthenia, indicanuria.

The local symptoms of cholecystitis in the acute stage are largely abdominal. The patient complains of pain in the back and shoulder, and often of a choking sensation which he says come on soon after eating, to make one think strongly of ulcer of the stomach. The pain at first is indistinct, indefinite and indescribable, but at last it becomes, in many cases, severe, agonizing, causing the patient to bend and to flex the thorax and the pelvis. If the patient is examined at this time, there will be noted an absence of the abdominal reflex upon the right side. There will usually be found an area of hyperesthesia in the back, covering portions of the seventh, eighth and ninth ribs. The area of hepatic dullness is increased, especially directly under the rectus, and if this is a patient who has had repeated attacks before, the border of the liver will extend nearly to the umbilicus. When the patient is relaxed with chloroform, this area presents a palpable, somewhat spherical,

tumor, which is not removed by laxatives, and can be felt with the right kidney in place. Now and then in the height of inflammation and when there is a peri-cholecystitis, a friction sound is heard with each inspiration and expiration over this region. Often the patient has had repeated attacks of vomiting and generally this vomiting is followed by some relief. The stomach is dilated, and if its contents are examined they will be found highly acid, containing much mucus and sometimes give evidence of fermentation.

In the chronic disease none of these findings is present except the hyperesthesia in the back, the pain in the shoulders, the choking sensation and the discomfort after meals. The gall-bladder is found covered with a long process of liver generally known as Riedel's lobe. The blood shows a moderate leucocytosis, the stomach is often excessively dilated and the patient has complained for years of stomach trouble.

The attention of the physician is called to the gall bladder in acute cases by the locality of the pain. In the chronic cases, however, he must look upon the rheumatism, the neuralgia, the myocarditis as the result of the toxemia, the source of which he gradually finds by exclusion in the gall bladder.

The indications for treatment of cholecystitis are very clear when we express them in a general way, but become very complicated when we come to consider individual cases. It is our duty to remove the infection from the gall bladder and leave it clean.

In the acute condition cholecystitis must be treated the same as appendicitis. Rest should be given to the part and if the cystic duct does not open and discharge the infected contents of the gall bladder, the fundus of the gall bladder must be opened and drained. When the viscus is clean the artificial opening closes, the bile passes through the re-

stored cystic duct and the patient is well. When the cystic duct is obliterated by disease we have an empyema of the gall bladder, which must be treated by drainage unless the mucosa is completely obliterated by secondary cholecystectomy. When a pericholecystitis has arisen, either by the perforation of the gall bladder or of the cystic duct about a stone, then the physician has waited too long and a complicated drainage of the upper peritoneal cavity and of the gall bladder must be undertaken, with regret and often with terror. When a partial or complete diverticulum of the gall bladder has been formed, and a cavity established outside the gall bladder containing bile and stones, this diverticulum must be drained, obliterated and the gall bladder itself removed or left behind as determined by the condition of the cystic duct. When cholecystitis occurs in the course of typhoid fever or under other conditions of hazard, the physician is often at a loss to know whether the operation or the continuance of the disease is the more dangerous to the patient's life. This will often be varied by the experience, skill and accuracy of the operator or by the actual condition of the patient's abdominal wall, or the gall bladder itself. A fresh, healthy gall bladder will stand a first attack of disease much better than an old gall bladder will stand a similar insult.

It is likely that every physician would feel the imperative indications of a case of acute cholecystitis, but few, however, recognize the possibilities of relieving the sufferers of rheumatism, neuralgia, stomach trouble and heart disease by draining the gall bladder. In closing my remarks on the indications for treatment I would call attention to a single condition, namely tachycardia, as one often relieved by draining a gall bladder and removing the source of a toxemia which shows itself in the action of the heart.

Mr. N., 54 years old, has lived a very active and largely an outdoor life. He has been healthy, temperate and clean. When about forty-five he weighed 220 pounds, but during the last three years he has fallen to about 180. During all this time he has been troubled with a sense of palpitation, dyspnea, and often in the night with a sudden sense of falling. He has been obliged of late to sit up a good part of every night on account of the dyspnea and the falling spells. For two years he has been treated for heart disease without noticeable improvement. In July he consulted Dr. Robert Babcock, who found a slightly enlarged heart, great tachycardia, with intermittent beat of the heart, but without evidence of arteriosclerosis or disease of the kidneys. His blood pressure was not high and was quite regular. After a few weeks' treatment he sought the source of the toxemia and located it in the gall bladder. I opened the gall bladder in August and introduced drainage. The gall bladder was found white, thick and covered by a Riedel's lobe. This lobe was also sclerotic. Drainage was kept up for five or six weeks and the pulse fell from about 120 to less than 90, and from intermissions which occurred six or eight times a minute to intermissions which occurred only once in eight or ten minutes. The dyspnea, the falling spells and the general malaise disappeared.

I have operated on more than twenty patients for heart disease by opening and draining the gall bladder and removing the stones when they were present. In only one case has it been necessary for me to make a second operation. Only one patient has died as the immediate result of anesthetic. He was a man of seventy-four years, and in a desperate condition. The size of the gall bladder has varied from one containing more than six ounces of fluid with walls less than an eighth of an inch thick to one containing only a few drams with walls almost a half an inch thick. Several of these gall bladders have been free from stone, while others have contained many stones, one as many as two or three hundred. One of the patients was operated on more than four years ago. Only



one of the patients has died of heart disease since the operation. One other patient has died as the result of a second operation undertaken upon an erroneous diagnosis.

Just a word now in regard to the method of operating. The patient is prepared by several days of mild cathartics. For this purpose I am accustomed to use half-ounce doses of phosphate of soda and occasionally where I have reason to suspect trouble a four ounce dose of the compound infusion of senna. The patient is kept in bed for twenty-four hours before the operation and the adequacy of the kidneys is demonstrated. When possible I am accustomed to make the abdominal incision under local anesthesia. Schleich solution or boiled water is injected in little whirls along the proposed incision for a distance of two inches. Then the incision is made and the muscle divided, the blood vessels pulled aside and the peritoneum opened.

Riedel's lobe is now found covering the upper half of the incision. The gall bladder and the cystic duct, the common duct and the pylorus are now explored with the index finger. The gall bladder is grasped with the artery forceps guided by the index finger and brought into the wound. It is fastened to the peritoneum and fascia by means of two catgut stitches. The gastro-colic mesentery is kept out of the way with a short strip of gauze tucked into the lower corner of the wound. An incision is now made in the fundus of the gall bladder and the stones, if present, removed, and a tube introduced for drain-

age. This half-inch pure gum tube is fastened into the upper corner of the wound with a silk worm-gut stitch which perforates the skin. This operation generally takes twenty minutes, if performed with a local anesthesia and eight to twelve minutes if performed under ether.

Cholecystectomy is to be considered only in gangrene of the bladder or after the cystic duct has been demonstrated to be permanently destroyed.

Cholecystitis is the first stage of biliary disease. The second stage and the one which offers all the tragedies which we are accustomed to associate with gall stones is known as choledochitis or disease of the common duct, on the one hand, and pericholecystitis on the other. Choledochitis is followed by pancreatitis and by cholangitis, while all of these conditions are at the border line of human resistance and of the possibilities of surgical relief. It is far more discreditable to the physician to allow a cholecystitis to go beyond the cystic duct than it is creditable to the surgeon to save the patient when the disease is in the common duct or peritoneal cavity. All the advance which is to be made in the treatment of biliary disease lies in the prevention of its extension beyond the cystic duct.

The use of immunizing serums is to be recommended after the gall bladder is opened or the pericystic abscess drained and not before.

Cholecystostomy is to be tried before cholecystectomy is undertaken, for we must not forget the Hippocratic injunction that above all things the physician must do no harm.

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Lipoma of the scalp may also simulate a wen. Both grow gradually, are semi-fluctuating and are movable on the deeper parts. Aspiration for diagnostic purposes is not a wise procedure; for if the tumor be a cyst, the contents may readily flow out through a puncture hole, making it difficult to remove the cyst wall at operation.

Liptomata of the scalp often undergo cystic degeneration. A tumor which grossly may look like a lipoma, may show under the microscope evidences of sarcoma. Fortunately these sarcomata of the scalp do not often form metastases.

## TERTIAN MALARIA ACQUIRED IN MICHIGAN.

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Detroit.

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I have to report a case of primary tertian malarial fever acquired in Michigan and in the close vicinity of Detroit. Some of my readers may characterize this as a very ordinary finding, but I question their ability to produce the microscopic slides to prove their assertions. This gentleman is one of the well-known physicians of Detroit, who has not been outside of Michigan in seven years except for a trip to Bermuda last winter. He has spent his summers for some years back at Orchard Lake, and last summer was attacked by a severe chill lasting for two hours, and which by myself, as well as by the attending physician was looked upon as the result of auto-intoxication. He had but one severe chill at that time. I was called to see him on the 27th of December, and found him suffering with a most intense chill, which lasted for two hours and was followed by a temperature of 104. He himself was inclined to believe that the chill was due to some dietetic indiscretions, and that the whole clinical picture might be considered one of auto-intoxication. I myself was inclined to agree with him. He was given mild antiseptics and small doses of quinine as tentative remedies. Two days following this attack he developed the second chill, which lasted 1½ hours, and was followed by the same degree of fever, i. e., 104. We both considered it advisable to have a specimen of blood for examination in order to ascertain definitely that there might not be some malarial organism present. I took a smear of the blood eighteen hours after the sec-

ond chill and sent it to Dr. Sill, at the clinical laboratory, for examination. While he was telephoning his report to me of tertian malarial parasite present in great quantities in the specimen examined, the patient was trying to get me on the telephone to report a third severe chill, which lasted one hour. We had then three chills occurring every second day, followed by high fever and by profuse sweating. The first chill lasted two hours, the second 1½ hours and the third one hour, this improvement being evidently due to 10 grains of quinine given daily. As soon as the parasite was discovered, quinine was crowded both hypodermically, and by mouth, and the patient had no more chills. Blood examination five days after last chill showed the blood clear of the parasites. The specimen which we got of the parasite shows beautifully the tertian form approaching the period of sporulation. Dr. Sill assures me that although he has examined hundreds of cases of blood, he cannot recall ever having examined a case in which the malarial parasite was present in the blood of a patient who had lived his life in Michigan, or especially in Detroit. Imported malaria is of course comparatively common; the southland, and the malarial districts of Europe giving us not a few cases. But malaria indigenous to Michigan may be considered a rarity. It is true that we all treat cases here which we call malaria, and which occur in people who have never lived outside of the borders of the state. We give them quinine and they recover. Whether these are true

malaria or whether they are some other entity I am not prepared to say. It is just possible that these cases, although they do not show the malarial parasite in the blood of the periphery, might under a careful examination of the splenic blood, show some of the parasites such as the aestivo-autumnal, whose

later stages of growth can be studied only in the spleen or in the deep-seated structures.

The physician who is the victim in this instance has asked me to report this case as he likewise knew it to be a great rarity.

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### SURGICAL SUGGESTIONS.

*(American Journal of Surgery.)*

In chronic catarrh, the first suggestion of ethmoidal sinus disease may be the appearance of thick, adherent, stringy mucus in the nasopharynx.

Polypi are not merely cystic tumors—they often spring from a base of diseased bone. Removing the polypi does not cure the disease; the affected bone necessarily must be removed.

Pain and swelling of the tip of the nose, is often caused by an infection of the hair follicles in the vestibule.

"Nose-picking" may result in a perforation of the septum.

An infection of the hair follicles of the nose is quickly relieved by the application of a 1% salve of yellow oxid of mercury.

A foreign body in the nose of a child is often suggested by a discharge of mucus from one side only.

Hard foreign bodies in the nose may sometimes be removed, where other means fail, by wiping the cavity and foreign body dry and applying sealing wax attached to cotton.

Small clinging pieces of adenoid tissue which have not been removed by the curette will very likely set up an inflammatory reaction on the posterior pharyngeal wall which is more distressing than the adenoids themselves.

Torticollis after adenoidectomy means a post-operative infection.

If on transillumination the maxillary antra are dark, it does not necessarily mean that pus is present. Thick granulations may be covering the antral wall.

One should not rely on feeling a tonsil engaged

in a tonsillitome; he should *see* that it is if he does not wish to take the chance of cutting away the pillars of the fauces, a portion of the tongue, the floor of the mouth or the uvula.

The eradication of a hypersensitive area in the nasal mucosa oftentimes will cure an obstinate hay fever.

Deformities of the septum, enlarged turbinates, etc., should receive operative treatment only when they cause obstruction.

A bilateral thickening of the nasal septum means either an old traumatism or gumma.

Traumatic perforations of the septum have thin edges; in syphilitic perforations the edges are thickened.

In overdistention of the bladder, due to prostatic disease, one should be careful not to empty the bladder too freely as paralysis of the bladder wall, as well as hemorrhage, might ensue. The patient is the best indicator of the amount to withdraw as he generally complains of cramp-like pain when too much urine is withdrawn. As a rule there is an accompanying congestion of the kidneys so that these patients may secrete from three to five quarts of urine a day.

A diffuse swelling of the orbit, moderate exophthalmos, intense pain and tenderness and marked edema, mean an infection extending deeply into the orbital planes. Unless early treatment is instituted, the eyesight may be lost, or the infection may extend along the course of the optic nerve resulting in meningitis or sinus thrombosis. Wherever there is fluctuation, early incision is necessary; and free drainage of the infected area is of paramount importance.



## The Journal of the Michigan State Medical Society

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to B. R. Schenck, M. D., Editor, 502 Washington Arcade, Detroit, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions or communications.

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MARCH

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### Editorial

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**So-called Optometry.**—The bill which the so-called optometrists have introduced in the Michigan Legislature with the object of providing for a registration of themselves should receive attention from every thinking physician.

According to Dr. J. C. Bossidy, ophthalmologist to the Boston City Hospital, the coining of the word "optometrist" required much thought, was selected from a number submitted, and finally adopted by the National Association of Opticians. This association was projected and fostered by a wholesale optical house in Boston, which supplied the official "cut" for advertising purposes. Any optician can become an "optometrist" by buying one of these trade-marks and paying thirty cents for the same. The result has been that every city and every town of any considerable size is filled with the "greatest eye-sight specialists of the present day." Some advertise that they test eyes free, the patient paying only for the glasses furnished. This, however, is against the policy of the National Association, whose president in 1904 said, "The best men make a charge for their skill, and this is as it should be. We can refract better than the oculist, and if we consider the total cost of the oculist's services and the charge of the dispensing optician for putting up the prescription, we can do work

*not only better than they, but cheaper."*

The same man further remarks:

"The oculist or ophthalmic surgeon's sphere of work is the treatment of diseased eyes and the performance of operations when necessary."

These "optometrists" therefore not only infer but impertinently acclaim that the physician is incompetent to do refractive work; they also have the effrontery to define and limit the oculist's field of work.

They are now after a state board of registration which will legalize their quackery. According to every definition of the practice of medicine, the fitting of glasses is the practice of medicine. The establishment of such a board and the granting of licenses to these fellows will dignify their trade and cheapen our profession.



**The claims made by the optometry "colleges"** are a good index of the quackery of it all. Dr. Bossidy has published the gist of the literature sent out by a number of these institutions. To quote:

The Lake Forest Correspondence Optical College advertises a correspondence course, "taught by mail by a regularly incorporated Optical College, incorporated according to the Illinois State Laws, endowed with the power to confer the degree of Oph. D. (Doctor of Ophthalmology) upon its graduates.

"Time required to complete course is *one week*. . . . We guarantee to make all students thoroughly competent. The entire fees, including examination, instruction, graduation and diploma, are \$15.00."

The Detroit Optical College's circular says:

"By these [the college's] methods of object teaching an intelligent person may become sufficiently familiar with the eye, its defects of vision and their accurate correction by properly adjusted glasses, in a few weeks to be skillful in all the requirements of the art."

This two weeks' course comprises:

"Everything that is necessary to make stu-

dents practical opticians, including a thorough knowledge of defective vision and its correction by means of the case of trial lenses and test cards, the practical application of prisms, ophthalmoscope, mydriatics, etc."

A diploma 16x21 inches in size is furnished, which contains "nothing to indicate that you have taken a correspondence course."

A "follow up" circular from the same college says: "In response to a number of applicants, we made a special club offer for forty pupils. We have enrolled forty-seven pupils in this club, and are furnishing them our \$12.50 correspondence course in optics for \$7.50.

"The above course consists of a book on diseases of the eye, etc., special typewritten instruction; examination questions which will be criticised and returned to you, and 16x21-inch diploma."

The Manhattan (N. Y.) School of Optics says:

"With the passing of recent laws wherein Optometry is recognized as a profession, a new and highly profitable occupation is opened to the retail pharmacist, jeweler, optician, etc."

The course is on lenses, light, the eye, optical instruments and correction for all defects.

The Kansas School of Optometry, now located at Boston, teaches by correspondence "anatomy, physiology, hygiene, neurology, myology, diseases of the eyes, functional nervous diseases and their cure, refraction, the complete fogging system, shadow testing by the static, dynamic and fogging methods and ophthalmoscopy.

"A complete course and diploma for only \$10.00. The greatest post-graduate course ever prepared for opticians."

On the door of this "college" this large painted sign stares one in the face: "Eyestrain causes Headache, Stomach Trouble, Epileptic Fits, St. Vitus's Dance, Cross Eyes, Cataracts, Female Trouble. We can cure you with Glasses."

The Klein School of Optics, Boston, requires the student to use Gray's Anatomy, Foster's Physiology, Brockway's Physics, DeSchweinitz on the Eye, Haab's Atlas of Ophthalmoscopy, Prentice on Ophthalmic Lenses. The student must also provide himself with a dissecting case, ophthalmoscope and retinoscope. At longest, these books and instruments are to be mastered in ten weeks, and that in spite of no preliminary training.

**What would happen if the optometry bill should pass?**—"If this bill should pass opticians would become oculists; makers of eye-glasses would turn eye doctors," says the *Journal of the New Jersey State Medical Society*. Furthermore, "ophthalmology would be farmed out to uneducated practitioners; two state boards would qualify men to treat defective sight. The treatment of defective sight would be declared outside the pale of medical practice; the commercial interests of the optician would be enhanced without improving his art; optometry would reside in offices and treat patients; faith curists, food faddists, neuro-magnetic and other non-medical healers would find the state obligated, by this precedent to grant other medical boards, without number; to regulate medical practice in some of its branches; the policy of the state would look to the interests of opticians rather than to the health interests of the people; the state would vouch for the safe treatment of defective sight by the optician; the state would stultify itself, by foisting upon the people an optician, in the garb of "optometrist," as one equally fitted to treat visual defects as pitted against the oculist; the business of making spectacles would be ignored by the profession of optometry; public policy would allow systemic disease to destroy the sight of unfortunate citizens while the "optometrist" would try to fit glasses to glaucoma or Bright's disease. As a part of state medicine, the optometry law would not measure up to the standards of medical science, but mark the decline of medical protection of the people."



**We are opposed to the bill because:**

1. The bill vitiates the profession's contract with the State of Michigan, as expressed in the existing medical law.
2. The bill degrades the educated phy-

sician, by ranking him by legislative enactment with the uneducated layman.

3. The bill is grossly unfair, in that it places the cheaply educated optician in competition with the expensively educated physician.

4. The bill misleads the laity, by teaching "that proper management of refractive defects is possible without a mastery of the elements of medicine."

5. The bill wrongs the people, by admitting laymen to the legal practice of medicine, so officially endorsing untrustworthy practitioners.

6. The bill tends to disintegrate intelligent medical practice, by permitting laymen to enter the medical field by other ways than the regular gate. If such side entrance be granted opticians now, the way is open to like admission later, from time to time, of other fragments, till disintegration has done its worst.

7. The medical profession strenuously objects to the legalization by the Legislature of any sort of laymen medical practice; it insists that all applicants for the right to practice medicine in Michigan, be compelled to register through the existing State Board of Registration in Medicine. Only thus will be conserved the united interests of both profession and people.

Every county society should see to it that the legislators of its county are informed how the members feel about this bill. Resolutions, couched in strong language should be drawn up, signed by as many members as possible and sent to the representatives at Lansing.



**More About Medical Defense.**—Ten states already have some plan of medical defense in working order, and as many more have some plan under considera-

tion. These plans range in efficiency from that of New York, where every case is defended from the treasury of the society, providing the member's dues are paid, and the cause of action arose subsequent to his membership, to that of Pennsylvania, where ten cents per member is annually set aside to be used in defense of any member sued, *provided*, a board of censors decides that he should be defended.

The Michigan plan as outlined in our February issue is formulated on the principle that a man is entitled to defense when he needs it, and needs it when sued or threatened with suit. Hence our plan is retroactive, and always, but especially during the first two years, we will have to defend some cases in which the cause of action occurred prior to the institution of the defense fund or prior to membership in the society.

But with a plan not retroactive no man is assured of having defense when he needs it, until the Defense Fund has been in existence two years, and the statute of limitations cuts off possible trouble from old cases, nor is any new member of the society certain of defense until a member for two years.

We refuse to undertake the defense of suits threatened prior to membership simply because some men would wait until threatened before joining. We also intend to defend suit instituted against the estate of any member in good standing at death.

These extra features make the Defense Fund of immediate value to every present and future member of the society, but materially increase the probable expense for the first two years. For this reason the committee thought it wise to provide for an initial assessment of *three dollars* per member but the Council, fearing a possible shrinkage in membership from the smaller societies, voted, with undoubted wisdom, to make the first year's assessment *one dollar and fifty*



*cents*, and stand back of the Defense Fund with the whole credit of the State Society.

The Defense Fund is then the State Society, and the State Society will furnish legal means of defense for all its members not in arrears for dues. Only suits for civil malpractice will be defended and under no circumstances will damages be paid.

Possibly this fund may prove inadequate the first two years, and need to borrow from the Council, but from the experience of other states it is certain that after a time the strength of the organization and the reputation and experience of its attorneys will deter all suits, except the occasional one which is legally justified.

In speaking of Medical Defense, we really mean the legal machinery for defense of the medical man. The State Society will not defend any man from the consequences of ignorance or negligence, but it will provide him the means of making his own defense without expense to himself. The greatest value of this feature of the work of the State Society will be its influence in preventing suits. It will save much money for the men who are sued or threatened with suit.

So far about two-thirds of the component societies have voted in favor of Medical Defense, and there seems little doubt that the membership of the State Society, with practical unanimity, want this special fund established.

There is no desire to force it upon any county society which does not want it, but county societies not yet decided upon the question should study and discuss it, until the matter is thoroughly understood.

In point of fact, the societies which are the slowest to take the matter up, probably stand in the greatest need of medical defense for the experience of sister states shows the general practitioner, especially the country practi-

tioner, to be the man most frequently assailed. Suit against the country doctor does him more harm, and has been more likely to succeed than against the city doctor, because the legal mind in small communities lacks knowledge of medical matters and adequate defense is infrequently made.

The general attorneys for the Defense Fund who will become men of large experience in medico-legal affairs, will brief the law for the local attorney and appear personally in important cases, with the result that every case will have the strongest defense possible. With the prophylactic influence of the State Society to prevent suit and a strong fighting defense in the occasional case brought to trial, we hope to see the time when a doctor can occasionally own property in his own name.



### Growing Pains and Their Significance.

—Doubtless every physician has met more or less often with some of the rather indefinite group of symptoms in children commonly denominated by the laity "growing pains," and has perhaps been inclined to dismiss certain apparently trivial ailments with this diagnosis, without giving especial thought to what the precise meaning of the term may be. It certainly seems irrational to suppose that normal growth can be the cause of pain, and the leading pediatric text-books of today do not recognize such a condition; but it is not many years since prominent writers gravely discussed "growing fever" as a clinical entity, and a very well known lay writer on child study endeavors in a recent book to give physiological reasons for painful growth.

It is probably safe to say that careful study will always reveal a pathological basis for these pains, and often one of considerable importance to the future

welfare of the child.

The pain is usually located in or near a joint, and may be transitory, intermittent, or continue for some time, but, in the beginning at least, is not severe enough or accompanied by sufficient constitutional disturbance to suggest real disease to any one but the physician who is well acquainted with some peculiarities in the symptomatology of disease in childhood. The causes are numerous and varied. Rather common and unimportant are myalgias and fatigue pains after over-exercise. Joint and muscle pains are frequent accompaniments of intestinal auto-intoxication. Pathological conditions of the epiphyses; partial separation, and the inflammatory lesions occurring in infectious fever; anemia, syphilis, etc., are not uncommon. A certain number of cases, at first apparently trivial, have proved later to be osteomyelitis, and the early stages of bone tuberculosis should also be considered here. "Rheumatism," or infectious arthritis, very often goes unrecognized in young children, because of the indefiniteness of the symptoms at this period. The fever is frequently so slight as to be unnoticed unless the temperature is taken regularly, and the joints are usually not appreciably reddened or swollen, nor very tender. The vague, sometimes "wandering," pains may be the only objective feature, and the ailment would be unimportant were it not for the possibility of resulting endocarditis. Of all the conditions mentioned, except the trivial fatigue pains, this is the most common, and the possible danger from neglect, as well as the tendency to recurrence, especially in children whom adenoids or tonsils render subject to frequent infection, make it desirable that both physician and parent appreciate that "growing pains" mean something else than growth.

**A Newspaper Worthy of Support.—**The *Detroit Saturday Night* is by far the cleanest newspaper published in Detroit, and one of the cleanest in all the country. Since its inception, it has taken a firm stand against the advertising of patent medicines of all types, against the advertising quacks of the city and against wild cat schemes of every description. The refusal to sell space to this class of advertisers undoubtedly diminishes the possible income of the paper many thousands of dollars each year. Moreover, the pages of *Saturday Night* are never reeking with the filth of the latest murder trial or scandal gleaned from the divorce court. It is a paper which all of us can safely bring into the home, and one to which the profession should give its hearty support.

A representative of *Saturday Night* recently called to interest us in a plan by which the profession might show its appreciation of the position which his paper has taken, especially on the patent medicine question. It seems that a special edition of the paper booming Detroit, is to shortly appear, and among the features planned was a page of photographs of the twenty-five (or possibly fifty) most prominent physicians of the city. The argument was that by allowing his picture and "write-up" to appear, the doctor would be showing his appreciation of the work of *Saturday Night*, and would not at all be taking fifteen dollars' worth of advertising. It was a pleasure to note that the representative was becoming somewhat discouraged about getting a page of such "moral support," and we have since heard that the scheme was given up.

When this special edition of 100,000 copies goes broadcast over the land, those who see it will probably say, "In Detroit—the physicians don't advertise."

Dr. H. Clay Todd, the notorious advertising quack who makes his headquarters at Lansing, Michigan, was recently convicted at Bay City, and fined the limit, under Act 245 of the Public Acts of 1899, which reads as follows:

"Section 1. Any firm, person, corporation or association of persons, or any employe of such or any of such, who in the newspapers or other periodicals of this State, or in public advertisements, or in communications intended for a large number of persons, knowingly makes or disseminates any statements or assertions of facts with respect to his, its or their business affairs concerning the quantity or quality, the value, the price of his, its or their merchandise, or the possession of rewards, prizes or distinctions, or the motive or purpose of a sale, intended to have the appearance of an advantageous offer, which are untrue or calculated to mislead, shall be guilty of a misdemeanor."

This act, which has until recently been practically in disuse from want of knowledge of its existence, has lately been brought into effect by the Board of Registration in Medicine, owing to its inability to secure conviction against Dr. Todd under the discipline clause of the 1907 act. This act, No. 245, of 1899, should be made a part of the medical law, and an attempt will be made to make it such. It would be well if County Societies would keep in mind the existence of this act and call the attention of their prosecuting attorneys to the same when opportunity offers.

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## Book Notices

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**The Principles of Pathology. Volume I, General Pathology.** By George Adami, M.A., M.D., LL.D., F.R.S., Professor of Pathology in McGill University, Montreal. Octavo, 948 pages, with 322 engravings and 16 plates. Cloth, \$6.00 net. Lea & Febiger, Publishers, Philadelphia and New York, 1908.

That Adami, of Montreal, was engaged with the task of writing a work on pathology has long been known, and the destruction of the manu-

script in the fire which destroyed some of the buildings at McGill two years ago, caused deep regret. Many of the illustrations prepared for the volume were also destroyed and it was necessary to substitute others, for the most part from German works. That the author has been able to rewrite the first volume in a comparatively short space of time bespeaks his industry.

The first volume, confined to the principles of pathology as distinct from the pathology of the various organs, is now out and it may be truly said to be the most important addition to medical literature of the year. The subject has been treated in a strictly scientific manner, and while all recognized theories on any one subject are fully given, the reader is never in doubt as to what the author himself believes. His personality pervades the whole volume. The text is never colorless.

The subject is approached from the standpoint of the biologist. The first 140 pages are devoted to the cell, followed by a full consideration of inheritance. Section II. deals with the causes of disease, inherited morbid conditions, abnormalities, intoxications, infections, and predisposition receiving careful attention.

Section III, comprising two-thirds of the book, deals with "Morbid and Reactive Processes," divided into the reactive changes proper, and the tissue changes. Under the first heading come a consideration of inflammation and four remarkably good chapters on immunity. Under the second heading are ten chapters on tumors. The author has his own theories as to classification, differing somewhat from that usually followed. A splendid section is that on the etiology of carcinoma. An appendix of four chapters considers some of the more minute questions of cellular pathology.

A general review of the book gives the impression of great thoroughness. Physiology, Chemistry, Embryology, etc., are quite fully discussed wherever helpful. The style is argumentative and forceful.

The volume is well printed and well bound. It reflects great credit upon the author, the university he represents, and indeed, upon American Scientific Medicine.

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**Diseases of the Skin and the Eruptive Fevers.** By Jay Frank Schamberg, M.D., Professor of Dermatology and Infectious Eruptive Diseases in the Philadelphia Polyclinic and College for Graduates in Medicine. Octavo of 534 pages, illustrated. Philadelphia: W. B. Saunders Company, 1908. Cloth, \$3.00 net.



It is with pleasure that we welcome the first edition of this most excellent little treatise. Not because of the real need do we extend the welcome, for this special branch of medicine is well abreast modern medical progress with excellent revised works by active authors; we welcome it because of its superior excellence in every phase of the work. Much credit is due Dr. Schamburg and his publishers for this work which is designed for the general practitioner and the student.

The first 280 pages, or about two-thirds of the whole book, are given up to diseases of the skin in their usual classification. One is surprised at the field covered in so few pages, so concise yet so comprehensive are his clinical descriptions. The same is true of his etiology, symptomatology, diagnosis and treatment.

The author in considering diagnosis has realized the importance of differential diagnosis in many common dermatoses and has inserted a most helpful double column of symptomatic differential classification of the two diseases most likely to resemble each other, such as papulopustular syphiloderm from acne, alopecia areata from tinea, psoriasis and squamous eczema, etc. The treatment is also brief but interspersed with few, but choice, prescriptions.

The work is amply supplied with most excellent photographic illustrations which with but few exceptions are from the author's original collection. Long before this little work was thought of, we admired the photographic illustrations of Dr. Schamburg's in other dermatological works.

The remaining 138 pages are given up to Acute Eruptive Fevers and complications of vaccination.

This coupling of Eruptive Fevers with considerations of Skin Diseases is most appropriate, in that the cutaneous manifestations of the eruptive fevers play such an important role in diagnosis.

This part of the work cannot be praised too highly in that it is the fruit of keen observation of a large experience.

This work is sure to be accepted by the student and general practitioner on its true merits.

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**Gonorrhoea in Women.** By Palmer Findley, M.D., Professor of Gynecology in the College of Medicine of the University of Nebraska, Omaha. Octavo, 111 pages. Cloth, \$2.00. St. Louis, C. V. Mosby Medical Book Company, 1908.

Until recently, American medical literature has had very few monographs, i. e., books devoted to

the consideration of a single subject. They are becoming more numerous and are to be welcomed by the profession. It is far better that Findley has devoted his time to the production of a book such as this rather than the one covering, in a small way, all of gynecology.

The subject is an important one and deserving of most careful study by the practitioner. The book has been carefully written and the text, while not free from typographical errors, is the best which the Mosby firm has yet put out.

The first chapter is an historical sketch of the subject. Etiology and pathogenesis are next considered, followed by a chapter on pathology. Many will not agree with the description of the uterus as given. Frequency, sociology and treatment are well described. Systemic gonorrheal infections are not given the space or attention which they deserve. Regarding the vaccine treatment, the author evidently agrees with Irons, from whom he quotes: "With further work the limitations as well as the advantages of the method will appear, and it should be recognized that while it is attractive theoretically as a specific therapeutic measure, too much must not be expected of it in the way of marvelous cures."

Quite an extensive bibliography is appended "for those who wish to go further into the literature." Of 152 references, there are only 23 to articles in English. Why so few?

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**Pathogenic Micro-organisms, including Bacteria and Protozoa.** A Practical Manual for Students, Physicians and Health Officers. By William H. Park, M.D., Professor of Bacteriology and Hygiene in the University and Bellevue Hospital Medical College, New York. New (third) edition, thoroughly revised and much enlarged. Octavo, 648 pages, with 176 illustrations and five full-page plates. Cloth, \$3.75, net. Lea & Febiger, Philadelphia and New York, 1908.

The first edition of this excellent book was published about three years ago. It was carefully revised for the second edition and has now, for a third time, been brought up to date. There has been a steady growth of knowledge since the book first appeared, but its authors have kept abreast of it and in this edition have given full consideration to the opsonic index, the bacteriology of the normal intestine and to the protective sera.

In general arrangement, there are three parts. The first consists of 17 chapters on the principles of bacteriology, the last four of which are devoted to a very comprehensive consideration of immunity. In the second part various bacteria

are considered in detail. There are also chapters on the examination of air, soil and water, the disposal of sewage and the bacteriology of milk in its relation to disease. Part III is devoted to the protozoa.

The book is an excellent one for the student. Moreover, the practical bearings of bacteriology are brought out in just the manner to make the work especially useful to the physician who wishes to brush up on the subject. It is to be highly recommended.

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**A Text-Book of Surgical Anatomy.** By William Francis Campbell, M.D., Professor of Anatomy at the Long Island College Hospital. Octavo of 675 pages, with 319 original illustrations. Philadelphia and London: W. B. Saunders Company, 1908. Cloth, \$5.00 net; half morocco, \$6.50 net.

Every practitioner owes it to himself to review once every few years, his anatomy. In selecting a book for the purpose, he should choose one in which the subject is treated in a practical manner, and one in which especial attention is given to the medical and surgical aspects of the science. This book is intended to supply a need of this kind and it does so in an admirable manner.

Its arrangement is logical, the subject being divided into regions. Surface anatomy is first given and then the various parts and organs are considered. Thus the body is covered under six headings as follows: The Head and Neck; The Thorax; The Upper Extremity; The Abdomen and Pelvis; The Spine and the Lower Extremity.

There are 319 illustrations, for the most part original. They have been well selected by the author and beautifully executed by Mr. F. A. Deck. The presswork, paper and binding leave nothing to be desired.

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**A Text-Book of Diseases of Women.** By Chas. B. Penrose, M.D., Ph.D., formerly Professor of Gynecology in the University of Pennsylvania. Sixth Revised Edition; octavo of 550 pages, with 225 original illustrations. Philadelphia: W. B. Saunders Company, 1908. Cloth, \$3.75 net; half morocco, \$5.25 net.

A glance at this volume gives the impression that it is primarily for the medical student; close perusal confirms the impression, and the author announces in his preface that such is its purpose. From the standpoint of teacher and student the book is helpful for its brevity, clearness, arrangement, and frequent revisions. It embraces all that the average undergraduate will assimilate, and commits no glaring errors of commission. One wonders at some of the omissions; for in-

stance, the chapter on Disorders of Menstruation discusses amenorrhea, acute suppression, scanty and vicarious menstruation, but does not refer to dysmenorrhea, meno- and metrorrhagia. These topics are barely mentioned casually under different headings. Like many other gynecologies, the work would be improved by a separate discussion of uterine hemorrhage and its significance. There is no chapter touching on arteriosclerosis of the uterus, and it is not included in the index, which is insufficient.

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**Nervous and Mental Diseases.** By Archibald Church, M.D., Professor of Nervous and Mental Diseases and Medical Jurisprudence in Northwestern University Medical School, Chicago; and Frederick Peterson, M.D., Professor of Psychiatry, Columbia University. Sixth edition, revised and enlarged. Octavo volume of 944 pages, with 341 illustrations. Philadelphia: W. B. Saunders Company, 1908. Cloth, \$5.00 net; half morocco, \$6.50 net.

No introduction is needed to this work, which has now become a standard, this being the sixth edition.

Its former excellence is maintained and this is given the benefit of a thorough revision. A new chapter on Psychasthenia has been added and such new matter and illustrations added as to increase the section on Nervous Diseases by almost twenty pages. In addition to the revision of the section on Mental Diseases, something on Psychotherapy has been added.

The text is clear and forceful and the well-established reputation of this textbook is thoroughly justified in this new sixth edition.

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**Surgical Memoirs and Other Essays.** By James G. Mumford, M.D., Instructor in Surgery, Harvard Medical School. Quarto, 358 pages, illustrated. New York, Moffatt, Yard & Company, 1908.

Medical biography and history are sometimes dry reading, but when an author catches the spirit of those about whom he writes, transporting the reader to the time and place of his subjects, there are no more fascinating books than those which tell us facts about our medical heroes. Mumford has a style which renders his essays very readable.

The volume opens with "Narrative of Surgery: a Historical Sketch," being a reprint of Chapter I. in Keen's System of Surgery. Hippocrates, Galen, Vesalius, Paré, Von Haller, John Hunter and Joseph Lister, together with a short history of American medicine are condensed in this first essay.



Other biographical essays are on Sir Astley Cooper, Sir Benjamin Brodie, Thos. Collins Warren, Jacob Bigelow. The paper on "The Teachings of the Older Surgeons" is instructive and especially interesting. "Studies in Aneurism" is a valuable historical resumé of the subject. Two addresses to nurses and a chapter on the "History and Ethics in Medicine" complete the volume.

The book is deserving of a wide circulation. It is one of the volumes the possession of which is always a delight, for it can be re-read at frequent intervals with profit and pleasure.

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**Pain: Its Causation and Diagnostic Significance in Internal Diseases.** By Dr. Rudolph Schmidt, Assistant in the Clinic of Hofrat Von Neusser, Vienna. Translated and edited by Karl M. Vogel, M. D., and Hans Zinsser, A. M., M. D. Quarto, 326 pages, illustrated. Price, \$3.00 net. Philadelphia and London. J. B. Lippincott Company.

There are many books in which are set forth the objective symptoms of disease—the signs—but there are very few which give at great length an analysis of the subjective symptoms. Of subjective symptoms, pain is perhaps the most universal and always of the greatest importance. Few books which have lately appeared will be more directly helpful to the practitioner than this translation of Schmidt. It was a difficult book to write, for there are required, in preparing such a manuscript, both an exhaustive knowledge of pathology and a very wide clinical experience. The author obtained the latter in the large clinic of Von Neusser, in Vienna.

The book is in ten chapters and these may be divided into those dealing with an analysis of pain in general, and those dealing with pain originating from the various "systems," or organs.

The publishers make a statement in their advertising which we repeat because we believe it is true:

"It is not too much to say that to most readers the perusal of this volume will prove a revelation of the possibilities inherent in the careful analytical study of this single symptom, and that there is no department of medical practice to which its teaching cannot be applied with profit."

The translation has been done well. The text is logical and clear and the illustrations excellent. The buying and studying of the book will prove a splendid investment of both time and money.

**Borderland Studies. Miscellaneous Addresses and Essays Pertaining to Medicine and the Medical Profession, and Their Relations to General Science and Thought.** Vol. II. By George M. Gould, M. D. Quarto, 311 pages. Philadelphia, P. Blakiston, Son and Company, 1908.

In 1896 the gifted author of this book published a similar one under the same title. Repeated requests for reprints long since out of print, has caused Dr. Gould to gather some miscellaneous papers in this present form, making the book into a companion volume to the one published in 1896. Few medical men have made more valuable contributions to sociological and semi-medical subjects than has Gould and it is fortunate that he has seen fit to preserve the essays in book form.

The scope of the volume may be learned from the titles of the essays, which are (1) The History of the House; (2) A System of Personal Biologic Examination; (3) The Life Study of Patients; (4) The Seven Deadly Sins of Civilization; (5) Disease and Sin; (6) King Arthur's Medicine; (7) Some Intellectual Weeds of American Growth; (8) Concerning Cranks, Megalomaniac, Morphinomaniac, Dotard, Criminal, and Insane Physicians; (9) Some Ethical Questions; (10) History and Psychology of Words; (11) Style; (12) Child Fetiches; (13) The Story and Lessons of an Unseen Hero's Life; (14) Vocation or Avocation.

In some of the essays, particularly the last, there is that strain of pessimism, often leading to untruthful statements (untruthful, at least, from the point of view of most of us) from which Gould never entirely escapes. It is to be sadly deplored, too, for his writings would have a much greater value and would be more universally appreciated, were there less "muck raking" in them. Nevertheless, anything Gould writes is worth reading and thinking over.

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## County Society News

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### Genesee.

At the quarterly meeting of the Genesee County Medical Society which was held January 26, 1909, Dr. F. W. Robbins, of Detroit, after giving the society a very interesting and instructive talk, was elected an honorary member of the Genesee County Medical Society.

B. E. BURNELL, Sec'y.



**Gratiot.**

At the February meeting of the Gratiot County Medical Society, held at Alma, on the 18th of the month, a motion was made and carried that the members would appreciate some such plan for medical defense as that suggested by the committee of the state society. It is understood that the matter will come up for final decision at the Kalamazoo meeting.

W. M. DRAKE, *Sec'y.*

**Hillsdale.**

The regular quarterly meeting of the Hillsdale County Medical Society was held in the Hillsdale Court House, January 29, 1909.

The officers elected for the present year are as follows:

President, S. B. Frankhauser, Hillsdale; Vice-President, I. J. Stoner, Osseo; Treasurer, W. F. Waller, Frontier; Secretary, B. F. Green, Hillsdale; Delegate to the State Society, B. F. Green, Hillsdale; Alternate, D. W. Fenton, Reading.

The following program was carried out:

Dr. E. A. Martindale read a paper on "Surgery in the Home"; Dr. A. L. Kinnan, a medical missionary from India, gave a very interesting talk on "The Practice of Medicine in India"; Dr. H. D. Wood, of Angola, spoke on "Some Minor Points in Surgery"; the final paper was on "Medical Expert Testimony," by Dr. W. H. Sawyer, Hillsdale.

The members of the Hillsdale County Bar had been invited to this meeting and Judge G. M. Chester and Hon. F. A. Lyon led the very interesting discussion.

The meeting was well attended and the program one of unusual merit.

B. F. GREEN, *Sec'y.*

**Ionia.**

The Ionia County Medical Society met at the Ionia County Court House on February 11, 1909, at 2 p. m.

The program was as follows: "The H. M. C. Tablet in Confinement," Dr. F. Lindley Hoag. Discussion led by Dr. S. Gleason. "Gastric Ulcer," Dr. W. L. Barnes.

There was a good attendance, considering the inclemency of the weather. The papers were well presented and the discussions brought out many things new and instructive.

While the monthly meetings are new with us

we are enjoying these frequently repeated gatherings. The closer we are brought together in our communal life the higher grows our appreciation of one another.

C. S. COPE, *Sec'y.*

**Ottawa.**

The January meeting of the Ottawa County Medical Society was held January 12, 1909, at Holland. A communication from the State Nurses' Association relative to the proposed bill for registration of nurses was read and very favorably commented upon by many practitioners. The Secretary was authorized to send the Society's Aid to the nurses through Miss Mary Welsh, Matron of U. B. A. Hospital, Grand Rapids.

The feature of the meeting was the presence of Dr. A. W. Hewlett, Professor of Internal Medicine at the University of Michigan, this being his first meeting with the societies of the state. Dr. Hewlett delivered an address on "Some Practical Results of Recent Researches on Digitalis." The address was thorough, covering the ground of the digitalis group and methods of administration and the therapeutic indications. It was eminently practical and of great value to the practitioners who were able to hear it. The doctor emphasized particularly the importance of giving the drug to the therapeutic result, regardless of what preparation was used, especially measuring the quantity of urine passed and pushing the dosage until free diuresis was secured. Then the drug should be stopped for three or four days, during which time digitalis is continually in action, and then giving it again interruptedly until results are secured. It is to be regretted that the address was not in writing so that the practitioners at large could profit by it, but this can probably be remedied as the address is, I believe, to be given in Grand Rapids, and perhaps elsewhere. Digitalis and heart-disease appear to be special interests of Dr. Hewlett and we feel greatly pleased and instructed to have the subject from such a present-day authority.

Another very instructive paper was presented by Dr. G. H. Thomas, of Holland, which was sent for publication in the State Journal, on the subject, "Non-Specific Infections of the Intestines."

The February meeting was held at Holland, February 9, 1909. The meeting was largely attended and was one of the best ever held by this county. The physicians appear to be very much

interested and come from long distances and at much expenditure of their own time. The members of our society are wide awake and some of our members come from Allegan and Kent Counties.

Dr. R. R. Smith, of Grand Rapids, gave a very interesting paper illustrated with lantern slides on the "Indications and Technic of Major Gynecological Operations." Dr. J. J. Mersen, of Holland, read a very practical paper on "The After Treatment of Laparotomies." A paper on "Emergency Surgery" was given by Dr. T. G. Huizenga, of Zeeland, which brought out an earnest and instructive discussion. Dr. J. H. R. Gervers, of Jenison, was elected to membership.

V. A. CHAPMAN, *Sec'y.*

### St. Clair.

The St. Clair County Medical Society held its annual meeting at C. M. B. A. Hall, Port Huron, on the evening of December 31, 1908. Officers for the ensuing year were elected as follows: President, Dr. A. D. MacLaren, Port Huron; Vice-President, Dr. R. C. Fraser, Port Huron; Secretary-Treasurer, Dr. R. K. Wheeler, Port Huron.

At the recent meeting of the society, held February 18, 1909, the following resolution was unanimously adopted:

*Resolved*, That as a society, we condemn the action of the Medical Department of the University of Michigan for soliciting and obtaining by offers of free treatment, the medical practice which normally belongs to the physicians in other parts of the state; and further be it

*Resolved*, That this resolution be published in the Journal of the Michigan State Medical Society.

R. K. WHEELER, *Secretary.*

### Schoolcraft.

At the annual meeting of the Schoolcraft County Medical Society the following officers were elected:

President, J. M. Sattler, Manistique; Vice-President, John M. Lipson, Germfask; Secretary-Treasurer, C. M. Livingston, Manistique; Delegate to the annual meeting of the state society, G. M. Livingston, Manistique; Alternate, Andrew Nelson, Manistique.

The following resolutions were passed:

*Whereas*, Attention has been called to the fact

that collecting agencies are again becoming active and

*Whereas*, We believe that physicians, by their tender, sympathetic, confiding and uncommercial nature are easily "taken in" by these concerns, therefore

*Be it resolved*, That to the future agent who enters the quiet precincts of our sanctum and with soft words endeavors to show whereby the ungrateful and forgetful can be brought to a realization of their sins, we will give naught but a stony stare and a marble heart.

We further instruct our secretary to send a copy of this resolution together with a clipping from the last *Courier Record*, which shows the painful experience of one of our brothers, to the state journals of Michigan, Wisconsin and Minnesota, also to the Journal of the American Medical Association.

G. M. LIVINGSTONE, *Secretary.*

The following is a copy of the clipping referred to:

### DISPLAY OF GALL.

Collecting Agencies, Rating Leagues,  
Etc.

A recent issue of a well-known journal, after cautioning its readers against mining companies, marble quarries, oil wells, land schemes, etc., etc., which, by glittering circulars, endeavor to sell stock in their various swindles, concludes:

"It is also to be noted that the 'collection agencies' (collecting their fees from the doctors and merchants rather than from their debtors) are growing bold again. We have recently been offered advertisements by them.

Our experience is that you can collect better through local talent."

In line with the above we print the following correspondence between one of our local citizens and a concern that has apparently stung several of our business and professional men:

"Manistique, Mich., Jan. 11, 1909.

"Gentlemen—Last March I gave you several accounts for collection. I have not yet received any money on those accounts. I have lately learned that you collected on a portion of them at least. I therefore demand that you return all those accounts with my share of the money collected. Failure to do this will result in your being published in our Journals, also an investiga-

tion to see if criminal charges cannot be brought against you."

Then comes their reply, which, for simon-pure, unadulterated, brazen-faced, we've-got-ye-money-just-whistle, nerve has them all beaten :

"Minneapolis, Minn., Jan. 15, 1909.

"Dear Sir :

"We beg to acknowledge receipt of your favor of the 11th inst., wherein we note your demand for the return of the accounts which you gave us for collection, and, as per this agreement we have with you, we are enclosing you herewith a statement, showing the *amount due us*, (when hold or stop further proceedings are ordered; and upon the receipt of that amount, by check, postoffice money order, or express money order, we will immediately return your accounts to you).

We want to say to you that you seem to be a rather fresh individual, and if you want to know when you're well off, when it comes to advertising matter, you will keep close to facts. The best thing you can do is to remit the amount due us by return mail. "COLLECTORS' AGENCY."

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**REPORT OF COMMITTEE ON LEGISLATION, MICHIGAN STATE MEDICAL SOCIETY.**

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To the Board of Councilors,  
Michigan State Medical Society.

Under the rules of the Association the Committee on Legislation begs to report as follows :

The work of the Committee this year will be along the lines of the defensive rather than of the offensive, from the fact that no legislation affecting the Medical Acts will be offered, and no other bills, as far as known, will be introduced, having the authority of the profession at large in the State. There will, however, be several semi-medical or mixed medical bills introduced, in which the profession is naturally interested and which affect them to a greater or less degree, and these bills as known will be considered in the Committee's report.

Re proposed Nurses' Bill, which will be introduced in the coming Legislature at the instance of the Nurscs' State Association. This bill, in the main, proposes the following :

First. The establishment of a State Board of Nurses, the members of which to be appointed by the Governor and membership to be confined to graduate nurses recommended by the State Association of Nurses.

Second. The establishment after 1909 of a standard of preliminary education the equivalent of a grammar school education.

Third. Prior to 1912 the requirement of a completed three-year course in a recognized training school for nurses, connected with a general hospital.

Fourth. After 1912, in addition to preliminary and graduation requirements under second and third, the requirement of a state board examination for state certificate, such examination to be conducted by nurses (members of the board), upon a standard set by such nurses.

Fifth. The usual provision for the registration of nurses already in practice, i. e., one-year graduate nurses prior to December, 1895, two-year graduate nurses prior to December, 1909, and non-graduate nurses in practice nine years prior to passage of the Act, recommended by one registered physician and two registered nurses and who successfully take a practical examination before the Board of Nurses.

The Committee of Nurses in charge of the bill contend (and the bill is in harmony with this contention) that nursing is a profession distinct in itself and entirely independent of and separated from the profession of medicine. Therefore in the proposed bill no provision has been made for control or endorsement, representation or interference in any manner by medical men, either represented by associations, medical or semi-medical boards or hospital boards.

In criticism of the provisions of the proposed Nurses' Bill above quoted and referred to, the Committee would state as follows: It approves and endorses the principle of state recognition and regulation of nurses. In this connection, however, from the fact that in the nurses' training schools the curriculum is authorized by medical men, the more important part of the teaching is done by medical men, the examinations in part are conducted and diplomas conferred by medical men, and that subsequent to graduation nurses are supposed, at least, to be under the immediate orders and supervision of medical men (and if this latter were not a fact, then nurses would be in violation of the Medical Acts), in the judgment of the Committee the provision in the pro-



posed bill for state board examination subsequent to graduation, conducted solely by nurses, and which involves the principle of the review of the work and duties of medical men, can only be characterized as an exaggerated *ego* on the part of the nurses, and illustrates the case of putting "the cart before the horse," with the cart so small that it can hardly be distinguished and is liable to extermination at every step of the horse. Of like nature also is the provision for the recognition of hospitals, established and conducted by medical men, by a board of nurses.

The provision for a minimum standard of a three-year course is objectionable, from the fact that if practical teaching is had in training schools, with the omission of several of the scientific subjects, necessarily imperfectly taught and of little practical value in nursing proper, an average capable nurse would be prepared in two years. Several of the leading hospitals in New York, Chicago, and other cities, have recently reduced the course to two and two and a half years. An additional important and practical fact, the National Hospital Association, representing the leading hospitals in the United States and Canada, has pronounced in favor of the two years' nurses' course. The tendency of the three-year course, as at present conducted, and if faithfully carried out, will result in the production of a further class of medical practitioners, imperfectly educated, and a menace not only to the medical profession, but especially dangerous to the people. In answer to this latter proposition, however, it has been explained that nurses in the third year of their course principally nurse pay patients (incidentally, at \$20 to \$25 per week, which, in most instances, goes to the nurses' school or hospital). In the opinion of your Committee, the practical outcome of the three-year nurses' course is the production of a \$25 per week nurse, which is hardly in the interest of the ordinary people who cannot afford a charge of this amount, and state regulation should not be in the interests of a class.

The Committee believes that the regulation of State Registered Nurses, with the standards and examinations involved in such registration, should be under the direct authority and government of the medical profession, as represented by the State Board of Health or the Board of Registration in Medicine. Nurses should be given proper representation in the examinations and management. The Committee can see no necessity or usefulness to be gained by the establishment of

an additional state board, and the recent Legislatures have emphasized the fact of their objection to the creating of additional state boards. To illustrate the opinion of the Committee relative to nurses' legislation, it begs to submit for discussion and criticism a suggestive nurses' bill.

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It has been reported that the Osteopaths contemplate an amendment to their present Act, which permits them to practice osteopathy (whatever that is) in the State of Michigan, but prohibits them from practicing medicine or surgery within the provisions of the Medical Act. Your Committee would oppose any further legislation in the interests of this cult, who are endeavoring to break into the medical profession by avoiding the normal safeguards.

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Re Optometric Bill. The optometrists, so-called, intend introducing a bill similar to that introduced two and four years ago. The scope of the bill is shown in the definition of the term "Practice of Optometry," i. e., the practice of Optometry is defined as follows, namely: The employment of subjective and objective mechanical means to determine the accommodative and refractive states of the eye and the scope of its functions in general, and the adaptation and adjustment of lenses or other appliances for the relief thereof, and the aid of vision.

The attempt by laymen to subdivide an important and well-occupied field of a specialty of medicine should be opposed on principle, if for no other reason. Very material reasons exist, however, for opposition to this contemplated subdivision. These reasons have been recited time and again and are well known to the profession. They are as follows, namely:

1. The bill vitiates the profession's contract with the State of Michigan, as expressed in the existing medical law.

2. The bill degrades the educated physician, by ranking him by legislative enactment with the uneducated layman.

3. The bill is grossly unfair, in that it places the cheaply educated optician in competition with the expensively educated physician.

4. The bill misleads the laity, by teaching "that proper management of refractive defects is possible without a mastery of the elements of medicine."

5. The bill wrongs the people, by admitting laymen to the legal practice of medicine, so officially endorsing untrustworthy practitioners.

6. The bill tends to disintegrate intelligent medical practice, by permitting laymen to enter the medical field by other ways than the regular gate. If such side entrance be granted opticians now, the way is open to like admission later, from time to time, of other fragments, till disintegration has done its worst.

7. The medical profession strenuously objects to the legalization by the Legislature of any sort of laymen medical practice; it insists that all applicants for the right to practice medicine in Michigan, be compelled to register through the existing State Board of Registration in Medicine. Only thus will be conserved the united interests of both profession and people.

W. H. SAWYER, Chairman.

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## News

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Dr. Edwin L. Thirlby, Traverse City, has returned from Europe.

Dr. W. A. Spitzley, Detroit, left on Feb. 19th for a trip to Arizona.

The new Dental Building of the University of Michigan was occupied in February. It is said to be one of the finest of its kind in the country.

The new Chemical Building of the University of Michigan is in course of construction, but will not be ready for occupancy till next year.

The house of Dr. Hugh M. Gale, Bay City, was burned January 19, with a loss of \$2,000, partly covered by insurance.

Scarlet fever has been epidemic in and around Standish, necessitating the closing of schools and strict quarantine.

Measles have been prevalent at the Industrial School for Boys at Lansing.

Dr. James Ardiel, Grand Rapids, has been committed to the State Hospital for the Insane.

The following appointments have been made to the Staff of the Women's Hospital and Infants' Home in Detroit: Dr. Nathan Jenks, visiting obstetrician; Dr. T. B. Cooley, visiting physician

to children; Dr. H. M. Rich, assistant visiting physician to children; Dr. B. R. Shurly, laryngologist; Dr. W. H. Morley, assistant visiting obstetrician; Dr. W. D. Hutchings, bacteriologist.

*The Indiana Medical Journal* and the *Central States Medical Monitor* have merged, and will hereafter be published under the name of the *Indianapolis Medical Journal*. Dr. S. E. Earp and A. W. Brayton are editors-in-chief of the new publication.

There are said to be 226 hospitals in New York City, of which the oldest is the New York Hospital, founded in 1776.

The Board of Regents of the University of Michigan have voted to increase the facilities for the maternity clinics in Ann Arbor. There will be accommodations for 30 or 40 patients, all available for teaching purposes.

Dr. T. J. Tenny, formerly of Saginaw, is now practising in Lansing.

The plans for the rebuilding of Harper Hospital are still under consideration by the trustees, with no prospect of immediate action.

Dr. Frank C. Bird has moved from Grand Rapids to Buckley.

Dr. Thaddeus Ames, formerly located in New York, has taken up practice with his father, Dr. Edward Ames, in Kalamazoo.

Dr. P. J. DePree has moved from Olive Centre to Holland.

Dr. W. A. Giffin of Ubyly has moved to Palms.

Dr. David Inglis of Detroit has removed his offices from the Majestic Building to 574 Woodward avenue.

Dr. P. M. Hickey has been appointed Roentgenologist to St. Mary's Hospital, Detroit.

The Second Annual Meeting of the Michigan State Association for the Prevention and Relief of Tuberculosis was held in Detroit on Friday, February 26. The program was as follows:

### AFTERNOON MEETING.

3:00 p. m., Lecture Hall, Detroit Museum of Art.

1. President's Address:

DR. C. G. JENNINGS, Detroit

2. Secretary's Report:

DR. A. S. WARTHIN, Ann Arbor

3. Treasurer's Report: DR. H. J. HARTZ, Detroit

4. The State Federation of Women's Clubs  
as a Factor in the Anti-Tuber-  
culosis Campaign:

MRS. FLORENCE MILLS, President  
of Michigan State Federation, Kalamazoo

5. Organized Labor and the Anti-Tuber-  
culosis Campaign:

MR. GILBERT DICKSON, Ex-President  
of Michigan Typographical Union, Detroit

6. Tuberculosis in our Almshouses:

REV. MRS. BARTLETT-CRANE, Kalamazoo

7. Tuberculosis Conditions in the Mining  
Regions of the Upper Peninsula:

DR. E. T. ABRAMS, Dollar Bay

8. The Law of 1895 and its Observance in  
Our Public Schools:

MRS. K. V. ENGLISH, Saginaw

9. The Physician and the Anti-Tuber-  
culosis Campaign:

DR. A. W. HEWLETT, Ann Arbor

#### EVENING MEETING.

8:00 p. m., Lecture Hall, Detroit Museum of Art.

1. Introduction: President C. G. JENNINGS

2. The Church and the Anti-Tuber-  
culosis Campaign:

BISHOP C. D. WILLIAMS

3. Consumption From the Standpoint of  
the Associated Charities:

MR. A. M. WILSON, Superintendent  
of Chicago Board of Charities  
(With Stereopticon)

4. The Cost of Tuberculosis:

PROFESSOR J. W. GLOVER  
Professor of Insurance in the Uni-  
versity of Michigan, Ann Arbor.  
(With Stereopticon)

5. The Essence of the Anti-Tuberculosis  
Campaign:

DEAN V. C. VAUGHAN, University  
of Michigan, Ann Arbor

The following certificates have been issued by  
the Michigan State Board of Registration in Med-  
icine, since August 1, 1908:

Gane, William Howard, Grand Rapids.  
Wiedman, Frank, Ann Arbor.  
Mix, Homer Pease, Benton Harbor.  
Snowden, Robert Hurst, Galien.

Kirby, Emily Short Flaws, Bangor.  
Coffin, Leslie Erwin, Iron Mountain.  
Brown, Benjamin Henton, Iron River.  
Davis, Egbert Frank, Jackson.  
White, Oliver Thomas, Detroit.  
Smith, Malcolm Eadie, Grand Rapids.  
Johnson, Guy McKeivitt, Traverse City.  
Chapman, George Eric, Wilkinsport, Ont.  
Donelson, Charles Park, Muskegon.  
Johnston, Donald Dinnie, Ann Arbor.  
Morrill, Warren Pearl, Benton Harbor.  
Sheppard, Emma L. Webster, Detroit.  
Ritter, Henry, Detroit.  
Brooks, Almon, Chicago, Ill.  
Landers, Morris Bernard, Ludlow, Mass.  
Wilson, Pitt Stevens, Negaunee.  
Cherry, Herbert Johnson, Grand Haven.  
Kaven, Gottlieb Henry, Unionville.  
Gervers, John Henry Richard, Grand Rapids.  
Meehan, Daniel Lawren, Battle Creek.  
Urquhart, John Henry, Ironwood.  
Beuker, Bernard Johan, Graafschap.  
Bartlett, Lucy Etta, Traverse City.  
Solier, Franz Emory, Pioneer, Ohio.  
Norris, Albina Marie Palicek, Detroit.  
Kergan, James Fales Calvert, Corunna.  
Urmston, Paul Robert, Bay City.  
Campbell, William A, Toronto, Ont.  
Burke, Frederick B, Detroit.  
Janes, Arthur P., Detroit.  
Soroch, Emil M, Detroit.  
Hotredt, Ingrald M. J., Muskegon.  
The following certificates have been revoked:  
Waters, Archibold M.  
Patterson, Albert A.  
Freemeyer, Harriet A.  
Stinchcomb, Thesis.

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## Marriages

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Edward J. Kirwan, M. D., to Miss Nora Ade-  
laide Genia, both of Ludington, recently.

Guy Johnson, M. D., Traverse City, to Miss  
Madge Lesure of Menominee, Wis., recently.

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## Deaths

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James Monroe Garvey, M. D., of Tower, died  
in a Sanitarium at Traverse City, February 1,  
aged 69.



Omer C. Bowen, M. D., a member of the State Medical Society, died at his home in Manistique, from heart disease, January 20, aged 68.

William Aitcheson, M. D., a member of the American Medical Association, died at his home in Ortonville, January 10, from pneumonia, aged 62.

Frederick W. H. Herbertz, for thirty years a practitioner in Detroit, died at his home, December 7, of dropsy, aged 62.

## Obituary

### Resolutions on the Death of Robert A. Blaisdell, M. D.

*Whereas*, Death has removed Dr. Robert Henry Blaisdell of Sheridan, from membership of the Montcalm County Medical Society, and

*Whereas*, We, the members of the society, recognizing him as our friend and one of the oldest and most valued members of our profession, therefore, be it

*Resolved*, By this society that we recognize his sterling worth as an able physician and a true gentleman, and that we desire to have his example perpetuated by having these resolutions recorded in our Journal, and, be it further

*Resolved*, That a copy be sent his wife and to the JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY.

Committee,

W. A. LEE, M. D.,

W. P. GAMBER, M. D.,

E. M. HIGHFIELD, M. D.

### Resolutions on the Death of Dr. Sigmund Bloch.

*Resolved*, That we, the members of the Muskegon-Oceana County Medical Society, cherish and preserve his memory and express our bereavement at his death; that we extend our sympathy to the sorrowing friends and relatives, and in common with them, deeply mourn the loss of our friend and brother.

*Resolved*, That this expression of our sympathy be spread at length upon the record-book of this Society, a copy transmitted to the bereaved widow, and to the JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY.

Committee,

A. A. SMITH, M. D.,

J. W. DENSLOW, M. D.,  
V. A. CHAPMAN, M. D.

[An obituary notice of Dr. Bloch appeared in the February issue of the JOURNAL.]

### Resolutions on the Death of William Aitcheson, M. D.

The members of the Oakland County Medical Society, with deep regret learn of the death of Dr. Wm. Aitcheson, at his home in Ortonville, Michigan, on January 10, 1909, after a brief illness of pneumonia, at the age of 62 years. They desire to place on their records an expression of their esteem for him and extend to his widow and surviving relatives their condolence.

Dr. Aitcheson was born in Canada of Scotch ancestry. After some years spent in teaching, he became a student of medicine in the University of Michigan, and graduated in 1873. He at once located in Ortonville and began there his medical career, which without change of location he pursued for over thirty-five years. The people in that part of the county soon came to know him as a good surgeon, a careful practitioner, a prudent counselor, a faithful friend, and they became closely attached to him and very generously supported and trusted him, while he on his part gave the best there was in him, working early and late and faithfully in caring for their bodily ills. Dr. Aitcheson was one of the charter members of the Oakland County Medical Society, and was very punctual in attending the meetings. Owing to the distance of Ortonville from the usual place of our meetings it must often have been very inconvenient for him to get away and the long rides must have been irksome. But he seemed much interested in the welfare of our society and in our work, and was very instructive to us especially when narrating cases drawn from his large storehouse of clinical experience.

We shall greatly miss him, with his cheery words, his bright smile, his friendly ways, and shall ever venerate his memory.

MASON W. GRAY, M. D.,  
Committee, WM. MCCARROLL, M. D.,  
STUART E. GALBRAITH, M. D.

### An Error Corrected.

In our review of the fourth volume of Keen's Surgery, we stated that there are three volumes yet to appear. There is but one volume to come out, the excellent work being complete in five volumes.

## Progress of Medical Science

### MEDICINE.

Conducted by

T. B. COOLEY, M. D.

**Medical Gymnastics in Early Myocardial Incompetence without Valvular Lesion.**—(BABCOCK describes his method of treating this condition, which is quite commonly seen in business men of large physique, often generous livers and heavy smokers, who spend the greater part of the day in their offices, devoting great energy and activity to business; but neglecting proper physical exercise. They take on weight, have usually disproportionate abdominal girth, and in the late fifties or early sixties begin to show results of long continued cardio-vascular strain. The degenerative process begins in the intra-abdominal veins, in which there is long continued high pressure with secondary increase in pressure throughout the whole system. The heart suffers most, the effect being shown in moderate enlargement, feebleness of the first sound, accentuated pulmonic second, high blood pressure, and breathlessness or palpitation on slight exertion. For cases of this character BABCOCK orders exercises, passive and active under the care of a skilled assistant, which are designed to diminish abdominal girth, to promote venous flow, and to facilitate the metabolism of the heart muscle. They are described in some detail and are quite different from the resistance exercises of Schott, to which BABCOCK prefers them. If properly carried out, they slow and strengthen the pulse, instead of accelerating it. A very important part of the exercise is the deep rythmical breathing which is insisted upon. The results obtained in proper early cases, have been gratifying.—*Am. Journ. Med. Sci.*, Jan. 1909.

**The Inunction Method of Administering Drugs to Children.**—RACHFORD has for some fifteen years been an earnest advocate of the administration of drugs to children in this manner, having begun with inunctions of guaiacol in tuberculosis. He enumerates various reasons why skin absorption is more rapid in children than in adults, and considers the method desirable on ac-

count of the greater importance of nutritional problems in the treatment of children, and the necessity of avoiding disturbances of the alimentary tract, as well as on account of the greater frequency and severity in children of the diseases most readily reached by inunctions, such as diseases of lymphatic structures and of the respiratory passages. Experiments are described which show that guaiacol, oil of wintergreen, and salicylic acid, combined with lanolin in the proportion of 1 dram to the ounce, and iodine in a 6% iodinevasogen ointment, were readily and quickly absorbed on inunction into the skin of the chest and abdomen, previously carefully washed and then warmed and reddened by moist heat. He believes guaiacol used in this way to be valuable in the treatment of lymphatic tuberculosis and tubercular peritonitis, localized infection of lymphatic tissue, and various forms of respiratory disease, in which he uses it as an antiseptic and expectorant to the exclusion of all the drugs commonly given by the mouth. Iodine and the salicylates also, he prefers to administer to children by inunction, and he expresses great faith in the inunctions of colloidal silver (Ung. Credè) in treating local or general sepsis.—*Ibid.*

**Cambridge's Reaction in Experimental Pancreatitis.**—So much discussion pro and con has arisen regarding the value of Cambridge's test that SPEESE and GOODMAN are engaged in an attempt to study the question experimentally. They report results obtained with eight dogs—in the first five of which necrosis of the pancreas was caused by injections of cotton oil into the duct, while in three a non-inflammatory lesion was produced by ligating the duct. Cambridge's latest "Reaction C" was used, and results were positive in all cases after a short time, though one showed some unexplained alterations between positive and negative reaction on different days.—*Ibid.*

# SURGERY.

Conducted by

C. S. OAKMAN, M. D.

**Immediate Operative Treatment of Certain Fractures.**—LEONARD FREEMAN emphasizes the fact that faulty unions after fractures treated in the old way occur as often now as formerly; but after judicious operative treatment the frequency of bad results is reduced. Cripples from ill-united fractures advertise a doctor's incapacity and lead to law-suits, so that we should fortify ourselves by constant recourse to the X-ray and always consider whether or not operation may give an ultimate better result. In such a consideration, FREEMAN lays down a number of propositions.

1. *No recent fracture should be operated upon that can be successfully treated by other means.*

Before abiding by this rule, one should have a correct estimate of his own skill, experience, and facilities for proper treatment.

2. *No recent fracture should be operated upon, except under the most favorable surroundings and by an experienced surgeon who is a master of aseptic technique.*

The operative treatment of fractures requires especial skill, and conscientious asepsis, with all the details that this comprises. It is not an undertaking for a novice.

3. *The resisting powers of the patient should be taken into consideration.*

This includes a knowledge of the urinary, respiratory, and circulatory systems, as well as other details of nutrition, age, vigor, etc.

4. *The patient's position and duties in life deserve attention.*

Individuals who need the utmost integrity of a given part in making a living deserve operative interference, and should take longer chances.

5. *The success of operative intervention depends much upon the accessibility of the fracture—the danger varying directly with the amount of manipulation required.*

6. *It should be recognized that faulty alignment and overlapping of fragments or even the presence of visible deformity, do not always mean disturbance of function.*

For instance, fractures of the clavicle seldom unite without anatomical deformity, but the functional result is usually satisfactory.

7. *In estimating the value of an operation, the*

*after treatment deserves consideration; will it be rendered less trying to the patient or give a better result in a shorter space of time?*

The care after operative treatment is usually easier, because extension is seldom required, tight-splinting is unnecessary, massage and passive motion can be begun earlier with less risk to the fragments, and union occurs sooner.

8. *The indications for operation vary greatly with the particular bone which is broken, the character of the break and the situation in the bone.*

Clavicles seldom need operative fixation; patellas and olecranon often require suture; avulsions of the tuberosities of tibia, humerus, and os calcis, and fractures of the surgical neck of the humerus, with dislocation of the head, practically always must be fixed by operation. Oblique and spiral breaks need open fixation oftener than transverse breaks. Epiphyses when broken offer especial need for operation.

9. *Admitting the desirability of operating in certain carefully selected cases, it must not be forgotten that there are two important drawbacks,—delayed union and sepsis.*

Delayed union is common after operation, and of course sepsis may occur at any time.

Freeman reports 33 cases of operated recent fractures, exclusive of skull, spine, jaw, and patella. He emphasizes several points of operative technique, such as preliminary preparation of the skin over night, the wearing of heavy gloves which will not tear easily on sharp points of bone, the making of long incisions to facilitate inspection and manipulation, the avoidance of irrigation and of turning out the ends of the fragments or injuring their periosteum; he advocates dispensing with osseous suture whenever possible, as for instance when the fragments interlock securely, but when suture is necessary in recent breaks he recommends bronze-aluminum wire; silver wire breaks too easily when twisted, and non-metallic material is not strong enough. When wire is not sufficient to hold the fragments properly, he uses a clamp, on the principle of Parkhill's; this can be left in situ for eight weeks if necessary.

As to time of operation, FREEMAN believes there is no valid reason for delay, while the advantages of immediate operation are manifold.—*Surg., Gyn., and Obst.*, Feb. '09.



## LARYNGOLOGY.

Conducted by

J. E. GLEASON, M. D.

**Concerning Hemorrhage After Excision of Adenoids.**—Operations upon the pharyngeal tonsils are generally considered without danger. However, wound infection and hemorrhage, although comparatively rare, do occur frequently enough to warrant careful attention. HAYMEN takes up the consideration of the latter, and divides hemorrhages into two types, those appearing immediately at the time of operation, and those occurring some time afterward. The causes in the first instance lie in a constitutional or a local condition. The most important general condition is hemophilia. Unfortunately we have no signs to aid us in a previous diagnosis of this condition. The most important points are, of course, family and personal history. However, one should give greater credence to a negative family history than to a positive one. In the rare cases in which a hereditary hemophilic tendency exists, members of such families know it from many sad experiences. If the patient states that to his knowledge no severe bleeding has occurred in his family, one can with greater certainty decide upon the absence than from a positive statement upon the presence of a hemophilia. If, however, there exists absolute proof of a hemophilia, naturally the operation would be denied. But in such cases as appear relatively doubtful, the operation should be given the benefit of the doubt. Like hemophilia, an unrecognized leukemia can be the cause of excessive hemorrhage; leukemia is relatively rare in childhood. It can, however, give rise to marked hypertrophy of the whole lymphoid ring as the first symptom of the blood disease. Characteristic is the livid bleached color of the tonsils. Operation in such cases can produce the same untoward results as in hemophilia. Fortunately, these local changes generally have only slight importance as compared to lesions elsewhere. Among other diseases which impose the danger of severe postoperative hemorrhage are nephritis, heart lesions, etc., which, however, appear so rarely in cases needing adenoidectomy that they can be neglected. Many authors have associated severe postoperative hemorrhage with the coincidence of the operation and menstruation. That a vicarious menstruation exists, requires for its diagnosis observation over some time. In postoperative bleeding the latter is explanatory only when the tendency has been positively proven.

More definite is our knowledge of hemorrhage due to injuries of the neighboring structures. The injuries of the larger vessels of the neck in adenoidectomy is as good as neglectable. The only possible place where such injury could take place (barring Schmiegelon's case, where the carotid was injured in its canal, due either to excessive force or abnormal fragility) would be in Rosenmueller's fossa, where the nerves and vessels of the neck are in intimate connection with the walls of the pharynx. Injuries can affect the vessels of the pharynx itself, such as the pharyngea ascendens, palatina ascendens, pharyngea decedens, vidian, etc., as well as the pharyngeal plexus of veins. Also the posterior end of the septum and posterior ends of the turbinates may be injured, leading to severe hemorrhage. Except for the danger of infection, acute inflammation offers no contraindication to operation, as postoperative hemorrhage is not more frequent at such times.

Two generically different forms of after-hemorrhage exist, one appearing in the first twenty-four hours after operation, the other after a longer period, most frequently on the third to fifth day. About one per cent of cases have after hemorrhage. Age has nothing to do with it. Vessel changes in the pharynx, the result of chronic inflammation, are also to be disregarded. Injury to neighboring parts, and especially the leaving of partly removed tissue shreds, are the important factors. The former, as explained above, more often leads to hemorrhage immediately following the operation, and only to after-bleeding when the blood clot covering the lesion is accidentally removed. Mucous membrane shreds hanging from the wound are found in over fifty per cent of after-hemorrhages. Not every shred, however, causes after-hemorrhage. At times they are cast off partly necrotic, or become involuted into more or less flat prominences. The cause of hemorrhage when it does take place is rupture of the dilated vessels due to interference with the return circulation, and infection. Hemorrhages occurring after several days generally follow sudden muscular exertion, such as sneezing, blowing the nose, etc., and are due to dislocation of the exudate covering the wounded surface. Healing has progressed so far after a week's time that bleeding is no longer to be feared.—*Archiv. fur Laryngol.* XX-I.

## DERMATOLOGY.

Conducted by

A. P. BIDDLE, M. D.

**The Treatment of Early Syphilis.**—At Woolwich, the method of innunction which FRENCH uses is on the general lines of Aix-la-Chapelle, modified by service conditions. He substitutes barley-water for sulphurous spring water in order to assist elimination by the kidneys and to guard albuminuria—which is rare in syphilis, except in severe cases which have not come under notice early, or have not received adequate treatment. A hot bath, with plenty of soap and water, is used every morning before the innunction, which latter lasts half an hour. Forty innunctions of 1 drachm. ung. hydrarg. B. P. compounded with lanoline or other substances, form a course. After twenty to twenty-five innunctions when thoroughly done, the teeth may, in some instances, especially if at all carious, feel tender on eating. Treatment is usually then stopped for a week. In severe cases it is wiser to give fifty to sixty innunctions with judgment. All carious teeth should be attended to prior to the commencement of a course. A mouth wash of acetate of alum is used in each case during the innunction course every two hours by day, and a soft tooth-brush is used twice daily. The groins and armpits are closely shaved, and must be kept so in order to guard against mercurial pustulation, which can usually be obviated by care and attention. He selects the groins, inner sides of thighs, and armpits, owing to the greater frequency of glandular orifices in these situations and so better regulated absorptions, as well as for the fact that the glands in these situations are ordinarily much enlarged and must be reduced before there is any question of suspending vigorous mercurial treatment. The glands are, no doubt, the repositories of syphilis, and when thoroughly reduced are capable of asserting their normal depurative and other functions. As cases of syphilis vary so much in variety and intensity, no hard and fast rules can ever be laid down as to treatment. One man may require mercury, another food, another tonics; but he finds no other method of treatment in the initial chancre and rash stage, say the first six months from contagion, that is so generally valuable as innunctions, but the method requires experience and detailed personal attention. He thinks that a syphilized person should always receive two courses of forty innunctions within the first six to nine months, and if practicable, four courses in the

first eighteen months. After the first two courses mouth treatment will ordinarily suffice to guard against relapse, according to the particular indication or the individual case. In many cases hydrarg. cum creta will fulfill all necessary requirements throughout the case. It can be understood, however, that the excellence of this method can only be tested among in-patients under restrictions, such as exist in military life, and that in civil hospital practice, or private practice, this treatment may be difficult to arrange.

The patient must be built-up first and local measures are essential. No doubt change of air is of great value, but general treatment is equally important in all grave cases. Milk, eggs and port wine should supplement the ordinary diet. The duration of administration of mercury is in some measure dependent on the type of constitutional disease, on idiosyncrasy, and on the general health of the patient. He objects to any method of pushing the drug and making the patient fit in with the treatment.

If mercurial stasis occurs, and a blue line appears on the gum, or if the gums be spongy and the tongue swollen, stop the drug at once. Give soft food and stimulants, hot baths, paint the gums with a solution of gr. X to the ounce argent. nitratis, and give a weak permanganate of potass. gargle every hour. It is his practice to give mercury more vigorously in the first than in the second year. If the patient is robust, and the attack severe, as evidenced by an infiltrated papular or pustular rash, with or without iritis or alopecia, and marked glandular enlargement, a larger quantity of mercury in the early stages is well tolerated by a careful dieted patient in hospital. If, on the other hand, the infection is a mild one, as evidenced by a non-infiltrated roseolar rash and slight adenitis, or if the patient is nervous or debilitated from any cause, or has carious teeth, a much smaller dose may be badly borne. As a rule mercury should be efficiently, invariably, but intermittently given for twelve months, although the first nine are much the more important, with gradually increasing longer intervals in the second year, and combined with mixed treatment with potass. iodide or tonics during the intermissions, according to the general condition.

MAJOR H. C. FRENCH, R. A. M. C., *British Journal of Dermatology*, December, 1908.



## ORTHOPEDIC SURGERY.

Conducted by

WILLIAM E. BLODGETT, M. D.

**Operative Treatment of Spina Bifida.**—On the basis of 24 cases and the study of other reported groups of cases, LOVETT advocates operation about the third week of life, but certainly early enough to prevent spontaneous rupture, because of the danger of infection and the greater difficulty of operation after spontaneous rupture. The advised operation consists of liberal, elliptical incision at the sides of, and freely into, the sac; careful dissection off of any adherent nerves from the interior of sac; resection of sac, as in inguinal hernia, and closure of neck of sac by silk, certainly to prevent leakage of spinal fluid; silk suture in median line of muscle and fascia flaps from sides, and catgut closure of skin. The important features of the operation are rapidity (if possible not more than half an hour), careful dissection of nerves from sac, and fluid-tight closure in three layers, as described. The contraindications are hydrocephalus, coincidence of other severe deformities, and paralysis. The mortality is 25 to 33% following operation, and 25% in the next three years from intercurrent affections; but the hopelessness of the outlook without operation justifies the operation in properly selected cases.—*American Journal Orthopedic Surgery*, October, 1907.

**The Present Status of Homes and Asylums for the Care and Education of Crippled Children.**—ROSENFELD states that in Middlefrankonia in 1904, a census showed approximately 6 per cent of the population could be classed as cripples, of which number but 25 per cent were children, 64 per cent were males and only 6 per cent of the children and 9 per cent of the adult cripples were mentally deficient. A large percentage, however, had never had any educational advantage, and never learned any trade or handiwork, and most of the cripples were not self-supporting, but were dependent on others for support.

Up to the beginning of the 19th century the lot of the indigent cripple was a hard one; they were cursed by God. In ancient times they were either killed or cast out; in the Christian era they became buffoons, targets for rude jests and sport, public or royal fools and jesters or beggars, and hardly differentiated from the blind or insane. In 1832 the first school and asylum in the history of the world was opened by Johann

Nepomuk in Munich. Here crippled boys were educated and taught a trade. This school grew slowly, but the idea it represented rapidly spread all over the world, but in every case the initiative came from private individuals, the state taking no active part in founding or managing such institutions.

The first "State" hospital for the care and education of crippled children was founded in St. Paul, Minn., by the State of Minnesota, as the "Minnesota State Hospital for Cripple and Deformed Children," under the management of Dr. Arthur J. Gillette. This has been followed by other States and governments, but in 1906 America still led the world in this respect.

A detailed account of each institution of Europe and America is given with the distinct acknowledgment that these institutions are incomparably more advanced and more complete in every detail in the United States than in any other country in the world. Such institutions must have a four-fold purpose: 1, as sanitarium for treatment; 2, as school for education; 3, as trade school; 4, as asylum for the helpless and indigent.

As the usual orthopedic treatment generally requires months and years of time, functions 1, 2 and 3 go hand in hand. The elementary studies which are persisted in alone for at least eight years in the "grammar" schools must here be supplemented early with practical instruction in a trade or craft, for the chief endeavor must not be to merely give the cripple an education, but to make him self-supporting. The trades usually taught to be successfully pursued in later life are bookkeeping, husbandry, tailoring, cabinetmaking, watchmaking, bookbinding, cobblery, tinkering, broom-making, basket weaving, weaving of all kinds—rugs, carpets, etc., for girls, sewing, darning, crocheting, knitting, embroidery, lace-making, mending, etc. The experience of the Widener Memorial Institute of Philadelphia shows that more stress should be laid on husbandry than upon all other trades. This, too, has a distinct hygienic value.

It has been shown that at least 96 per cent of all the pupils who have graduated from these institutions in the last twenty-five years are self-supporting.—*Arch. f. Orthopädie, Unfall Chir. und Massage*. Bd. V, H. 2 and 3. *Abst. Am. Jour. of Orthopedic Surg.*, August, 1908.



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## Original Articles

### REPORT OF A SMALL EPIDEMIC OF ACUTE ANTERIOR POLIOMYELITIS.\*

J. G. R. MANWARING, M. D.,  
Flint.

We have had this past summer in this locality such an unusual number of cases of acute poliomyelitis that it amounts to a small epidemic. Others have been reported in this state, such as the one in Western Michigan reported by Ostrander (1) and one recently noted in the newspapers at Chesaning.

Of the cases given in this vicinity I have had the privilege of studying three personally. The others found in the report later are through the kindness of the physicians whose names are given with them.

Acute poliomyelitis is known by various names, as infantile paralysis, acute atrophic paralysis, acute infantile spinal paralysis, acute bulbar palsy, acute polioencephalitis, essential paralysis of infants, etc., names all more or less descriptive of the patient or the lesion, but none of them being exact or as comprehensive as the pathology of the condition calls for.

#### Etiology.

The specific causative agent, if there be one, of acute poliomyelitis has never

been found, although from the character of the lesions, the tendency to epidemics, the apparent following of lines of travel, its prevalence in summer and autumn, and the clinical course, an infective or toxic factor is presumed to be present.

The disease, especially in sporadic types, has been attributed to many forms of preceding illness, accidents, exposures, unhygienic surroundings, etc., but it happens often independently of such influences, especially in the epidemic cases, and none of them occur often enough to insure more than an accidental relationship. There seems to be a possibility that dry summers may have an undue influence in its development.

Bowel disturbance with diarrhea or constipation occurs in nearly one-half of the cases and an initial angina is often mentioned. These point to the alimentary tract as the atrium of infection.

The cases when sporadic, occur in the summer in 80% and the epidemics always occur at this time with possibly a few earlier or later.

In the sporadic cases 80% occur before three years of age and are rare after ten,

\*Read at the quarterly meeting of the Genessee County Medical Society, October, 1908.

while in the epidemics no age apparently is exempt, though the most of them occur in early childhood. Males are slightly more often affected than females, but not to any marked degree. Leegaard and Wickman<sup>3</sup> describe epidemics which follow lines of communication closely and even individual cases which were due to contagion traceable to preceding ones, but ordinarily the direct spread is not so evident that it attracts attention. In all large epidemics there are cases occurring in more than one member of the same family, as in the recent one in New York where there was one family with three cases and three others with two each attacked. In the epidemic I report one family had two little girls stricken within one week.

The sporadic cases, while not rare, are so uncommon that many physicians never see one unless they have presented to them an old case in some clinic, but an epidemic makes them so plentiful that they attract wide public interest, and the children's hospitals are filled with them.

Among the more prominent epidemics listed at present is the early one of Colmer in Louisiana, in 1841, so far as known the first one reported. This comprised 8 or 10 cases. Bull in Norway, reported 14 cases in 1868. Caverly in Vermont, reported 119 in 1894<sup>5</sup>. Since then they are mentioned more often until now nearly fifty are given.

The majority of the epidemics are in the United States and the Scandinavian peninsula. Wade and Litchfield report 69 cases in Australia. This is the only one elsewhere than in the two regions mentioned, which is of note<sup>6</sup>.

In Norway in 1905 and 1906, over a thousand cases occurred, and in New York city and its suburbs in 1907 over 2,000 cases. It is from these large epidemics that much of our knowledge must come regarding the disease.

### Pathology.

Starr<sup>1</sup> reports the findings from extensive investigations of the spinal fluid obtained by puncture, and the blood serum of cases in the New York epidemic with a post-mortem examination of only one case, and that two months after the acute attack in a patient dying of miliary tuberculosis. The serum investigations throw no light of a positive kind on the subject. Harbitz and Scheel<sup>7</sup> have given us the results of very minute and careful examinations by post-mortems of 19 cases in the Norway epidemic, most of them during the acute stage of the disease. Their findings are the same as others have obtained, but are given in so much more detail that we are indebted to them for our knowledge of the morbid changes in this condition.

There occurs an inflammation of the pia mater in all cases, even the mild ones, which extends throughout the spinal canal and the cranial cavity. This is a simple non-purulent condition with extravasation of lymphocytes and a very marked congestion, especially along the anterior portion of the cord and the base of the brain. It is unlike the inflammation of cerebro spinal meningitis in that there is no extravasation of polymorphonuclear cells and no suggestion of a purulent condition.

This process is intensified in various localities and extends along the nutrient vessels into the substance of the cord and bulb; here there is developed an edema, thrombosis of the veins and arteries, hemorrhages, and small hematomata in some cases. There ensues a degeneration and loss of the most perishable structures present, and that means the cells of the gray matter, especially in the anterior horns. Active phagocytosis of these diseased cells is found. The more resistant white columns and the meninges escape any destruction of a similar kind so that if

recovery follows the residual symptoms are due to the loss of the terminal neurones which cannot be regenerated. This process is found in any part of the nervous system, the anterior horns and the motor nuclei of the bulb suffering most often; less frequently the basal ganglia and even the cortex of the brain are involved in the same manner.

The symptoms and the ultimate results depend upon the severity of the pathological process and the extent of the destruction of the gray matter, and the location of these lesions.

No conditions comparable to those of cerebro spinal meningitis nor of multiple neuritis are found, so that the relationship of these diseases claimed by some from clinical symptoms is doubtful. On the other hand in the Norway epidemics cases of various kinds showed typically, both clinically and by post-mortem examination, what ordinarily we consider a distinct disease, i. e., transverse myelitis, also just as typical cases of acute bulbar paralysis, and acute encephalitis without paralysis were found, and in addition cases which were apparently transitional between these diseases and the usual poliomyelitis. The different localizations of the process alone made the differences in the clinical course. No part of the central nervous system is exempt from the disease.

They regard Landry's paralysis the same as a severe ascending poliomyelitis. A study of 23 cases of Landry's paralysis collected by Hall and Hopkins, and their comparison with cases of severe polyomyelitis show no essential clinical differences. In fact there is a possibility that after all they are similar conditions, and that they occur sporadically unassociated with other cases which would establish the relationship. E. D. Black<sup>9</sup> reports a case in New Mexico as Landry's paralysis in an eight-year-old child, which is an exact counterpart of

many cases found in poliomyelitis epidemics.

The symptoms of meningeal irritation and cerebral disturbance so often found in the early days of cases of infantile paralysis support the findings of an extensive, almost general, meningeal inflammation with secondary localizations of greater intensity; and the occurrence of the paralysis subsequent to these meningeal symptoms points to a later involvement of the cord itself.

After the acute symptoms subside and the inflammation clears up, there is little left to show, except in those areas where the nerve cells were destroyed, where there is atrophy of the cord, with a disappearance of the essential cells entirely, or nearly so, those remaining being of small size. The nerve roots leading from this region are small and the muscles, deprived of their innervation, undergo secondary atrophy with a replacement of the fibres by fibrous and fatty tissue. The limb or portion of the body involved, if in a child, never develops fully, and becomes deformed from the action of gravity, a lack of muscular balance, and improper use.

### Symptomatology and Course.

For purposes of convenience in describing the clinical course of the disease the following arbitrary divisions may be made:

1. The abortive poliomyelitis.
2. The poliomyelitis of moderate severity (usually resulting in a monoplegia, or possibly a group of muscles being paralyzed).
3. The acute ascending poliomyelitis of severe type.
4. The bulbar poliomyelitis.

Abortive poliomyelitis occurring sporadically, or in the practice of a physician not familiar with the condition, though it is during an epidemic, will not be diagnosed. During epidemics they



are frequently found, and are mentioned in all the later reports in considerable number.

In this type the patient has a fever of moderate degree, is restless, anxious, possibly has some bowel troubles, and has headache, neckache, and backache, with pains down the legs. There may be muscular twitchings and sensitiveness when handled. After three or four days these symptoms subside, and then it is noticed that the patient is disinclined to use the legs, and if old enough complains of muscular weakness and fatigue out of all proportion to the duration and severity of the illness. No actual paralysis develops. In a week or two there is complete recovery.

In the ordinary cases where paralysis does occur, the prodromal symptoms are the same, excepting that they are probably more severe. There may be muscular rigidity in the neck and retraction of the head. The temperature runs up to 101 or 103° F. There may be vomiting, sweating, prostration, restlessness, and severe pains in the back and extremities. There is often an inability to empty the bladder and little control of the bowels. This continues three or four days, when paralysis occurs, though it may be unnoticed until later because of the severity of the other symptoms. The affected extremities are flaccid and tend to get cold and cyanosed. The paralysis may be limited to one group of muscles, or to one extremity, or may involve the trunk or upper extremities. It reaches its maximum in a few hours to three or four days. In a week or ten days after the paralysis occurs the patient begins to improve until only a comparatively small amount of the original paralysis remains permanent. Recovery may be complete even in severe cases, especially in the epidemics. The control of the bladder and rectum when lost is always regained in 9 or 10 days, and the trunk muscles usually recover<sup>10</sup>.

At one end of this group we have the very light cases which show only a little peevishness or some slight indisposition before the paralysis is noticed. The patient may not be brought to the attention of a doctor at all until a helpless limb alarms the parents. This mild type is more often found in the sporadic occurrence of the disease than in the epidemic form.

The acute ascending poliomyelitis is exactly like that described above excepting that the lower extremities, bladder and rectum, abdomen, back, chest, upper extremities, throat, etc., are involved in order until as the medulla is attacked, respiratory paralysis ends the distressing scene.

In the bulbar poliomyelitis, the symptoms outside of the paralysis are much the same; the motor nuclei of this region being first involved, the paralysis affects the throat, eyes, face, tongue, etc. There are found all the varieties of strabismus, typical Bell's palsy, difficulty in phonation, deglutition, choking, and related symptoms. The paralysis may pass downward and respiratory failure occur, as in the ascending type. Recovery may be partial or complete as in the other forms.

If death does not occur, after the acute stage has passed, there is a period of quiescence for two weeks or a month, then a rapid improvement follows, which becomes slower after three months, although some slight additional improvement may be expected up to two years.

### Diagnosis.

This disease occurring sporadically cannot be diagnosed unless the paralysis is very evident. It may simulate a beginning typhoid or meningitis closely, but the muscle failure serves to distinguish them when it comes. After this occurs it must be differentiated from multiple neuritis, transverse myelitis. Landry's paralysis, hip-joint disease, and

the pseudo paralysis of scurvy and rickets. The latter three conditions should be eliminated if care is used.

Multiple neuritis may be distinguished with difficulty in some cases, and one may be in doubt until the course is followed for some time. The slower onset, the simultaneous involvement of all four extremities, the tenderness which persists along the course of the nerves and other features in those cases which are not so like poliomyelitis will assist in labelling them.

Landry's paralysis is still a vague term. If we confine it to those cases with acute ascending paralysis without the involvement of the bladder or rectum, and without evident lesions when examined post mortem, then we can distinguish them by combined clinical and autopsical features. If we include those cases of acute ascending paralysis without a co-existent sensory paralysis, then we cannot tell the difference between them.

Transverse myelitis has a sensory paralysis, also bedsores and permanent sphincteric loss in bladder and bowel to distinguish it. Yet in poliomyelitis epidemics we may have cases of this type, as has been mentioned.

### Prognosis.

In the abortive cases recovery can be promised.

In the sporadic type very few recover completely, and on the other hand they almost never die<sup>2</sup>.

There is always a great recession in the extent of the paralysis until only a muscle or two remains disabled, or a group of muscles functionally related, as the flexors or extensors of a limb.

In the epidemic form complete recovery is common; even in those with all the limbs and the trunk involved recovery may be complete, as occurred frequently in the New York epidemic. This total recovery is found in one out

of four cases, though the percentage varies in different reports, probably in part due to the difference in the inclusion of abortive cases.

Wickman reporting the Norway epidemic, states that the older the patient the graver the outlook, death being the rule in adults and frequent in older children. Taking all ages into consideration, death from respiratory paralysis, paralysis of the throat with regurgitation, choking, etc., comes on in different epidemics in from 6% to 25% of the cases. The higher mortality may in part be due to the omission of the abortive cases in the tabulation. Probably the average mortality is about 10%. In the great New York epidemic it has been estimated at 6 to 7% by Starr. In the Scandinavian about 13½%.

If the patient survives until the 10th day he will probably live, the most of the fatalities happening in about six days.

If the paralysis is of rapid progressive type the prognosis is grave indeed. One can in these cases watch one reflex after another fail and find one after another of the muscles relaxing, becoming flabby and useless, until the respiratory muscles begin to suffer, then begins a struggle which is painful to watch, and this, with choking from a relaxed tongue, finally terminates the spectacle.

In individual cases an electrical examination of the parietic muscles will be the best means of predicting the outcome. These muscles which lose their faradic excitability early and completely will never recover much. Those which lose it slowly or not so completely will recover nearly entirely. In those muscles which after two weeks still show faradic excitability, recovery will be complete although there may still be a greater loss first<sup>11</sup>.

### Treatment.

The treatment of poliomyelitis natur-

ally falls under three heads, i. e.:

1. The acute stage.
2. The stage of quiescence and improvement.
3. The chronic stage.

The treatment during the acute stage is one of expectancy, for we have nothing of proven efficiency in arresting the progress of the disease or limiting its extent. Theoretically a position on the face or side should relieve the congestion some and possibly prevent some of the vascular lesions. Dry cups, counter irritation of many kinds, ice bags, hot applications, etc., are recommended for use locally.

The bowel needs simple attentions and the bladder may need to be catheterized, the process being assisted by pressure on the abdomen because of the weakened muscles. Purgation, diuresis, sweating, are all used because of their supposed effect in eliminating the supposed toxins causing the trouble.

Of medicines other than those which have the above actions, as usual where none have much influence many are recommended. Urotropin and the salicylates are suggested for theoretical reasons. Aspirin, phenacetin, codein, morphine, and opiate mixtures are useful in controlling the pain. Ice to the head, where meningeal irritation is marked, seems proper. Strychnine is strongly advocated by some and as strongly condemned by others, and if it is used it should be late, after all active inflammation has subsided.

On the whole we can say that the best treatment is the one which attends to the comfort of the patient and the elimination of the excretions by the simplest measures.

During the quiescent stage and stage of improvement, the attention should be directed towards keeping the general condition of the patient as good as possible and to prevent overstretching of

the weakened muscles and deformities by malposition. Light pliable splints do this all right when adapted to the case. It should be remembered that a muscle which through weakness is allowed to rest in an over-stretched position cannot recover its contractility<sup>2</sup>.

I would like to suggest, with this point in mind, that possibly the reason extensor paralysis with footdrop is the most common deformity left after an attack of poliomyelitis is because there is a greater tendency for this deformity to occur from the weight of the bedclothes and the action of gravity than any other, and that through a lack of constant correction the extensors do not have a chance to recover as often as they otherwise would.

During the stage of recovery the muscle nutrition can be maintained properly by massage, warm baths, warm clothing, salt rubs, moderate use of those muscles which are partly controlled, and similar measures, always remembering that the muscles will tire easily, and that the treatments should be short. The applications of electric currents especially can be overdone, and it is a question if they are one whit better than a warm sponging and rubbing with a coarse towel, such as any nurse or mother can give. Electricity is more properly used for prognosis and diagnosis than anything else in these cases.

The most important treatment is that given during the chronic stage or stage of residual permanent paralysis. It is the most important, inasmuch as the surgeon's influence here determines the subsequent condition more than at any other time. He cannot cure the paralysis, but by orthopedic measures he can ameliorate the disability and correct the embarrassing deformities or even by surgical means he can supplant the damaged muscles by active ones, and thus secure functional cures in whole or in part.



Only a few of the useful measures can be mentioned briefly here, as it is a large subject. Excellent presentations of it are given elsewhere by Tubby and LeBreton<sup>12</sup>, and also in books treating of orthopedic surgery.

Mechanical appliances are used to fix joints and assist weakened muscles in overcoming improper positions, as in toe-drop and other malpositions of the feet. This may improve a child's walking or enable him to walk when he otherwise could not.

Fixation of the joints by surgically removing the surfaces and allowing a bony ankylosis to form, is useful in some cases, especially those where the parents through poverty are unable to supply expensive apparatus or are apt to neglect its use. This is only advised for the wrist, ankle, and shoulder, and not for the elbow, knee, or hip. It should not be done in a child under 10 years of age, as success is much less assured.

Transplantations of the tendons of good muscles to those of the diseased ones, or better to the periosteum of the bone directly or by silk thread extensions, are frequently of service and secure good functional results. One example of this is where the hamstrings are brought forward and attached to the patella in treating a quadriceps extensor paralysis and thus curing a dangle leg.

Nerve transplantation, where tendon transplantation cannot be used, as in paralysis of the deltoid, has given some good results, but is less certain.

In these surgical procedures, where a restoration of function is attempted, the cases must be carefully studied and selected, and only those with a limited group of muscles affected should be operated.

In the epidemic I wish to report in this region, I have here tabulated those of the cases concerning which I have been able to receive some authoritative details from the physicians whose names

are given with them. Others I know have been affected with poliomyelitis hereabouts from reports of an unauthoritative nature, which would bring the total number of cases probably up to fifty. I have thirty of them charted. Of these the clinical histories have been typical of the epidemic poliomyelitis as described, and we have had all of the variations ordinarily given; as three bulbar cases; three acute ascending cases with death, and one which made a partial recovery; cases without prodromal symptoms of note, and those with very severe ones; several with bladder paresis, many with obstinate constipation; a few had diarrhea. The males and females were about equally divided. In age they ranged from 2 years to 32, the average being 10 years, rather higher than is usual. Of those aged 10 and under all lived, 18 in all; of the eight between 10 and 20, two died, 25%; of those over 20, there were four; three died, 75%. This mortality ascent with age corresponds with Wickman's observations. Altogether there were 5 deaths, 16.6%, rather higher than the average epidemic, but in accordance with the higher age average.

Of individual cases a few facts of interest may be mentioned.

Dr. E. C. Rumer had two little girls in one family stricken within a week of one another.

Dr. C. B. Pierson, of Mundy Centre, reports 12 cases in a rural community, a number in comparison with the population much higher than any of the epidemics I could find. Of these six were of the abortive type, with no actual paralysis, but with a muscular weakness out of all proportion to the severity or duration of the illness they had. The associated prodromal symptoms were typical of the disease. Probably many others of a similar kind have occurred here without being diagnosed.

He also reports one case of bulbar paralysis, involving the face, neck and eye

muscles, with a strabismus remaining as a result. In view of the fact that Starr states that in the New York epidemic this did not occur as a permanent sequel this case is unique.

Of these cases personally I observed three, the 14th, 23d, and 30th, in the table. The latter only is worthy of comment, inasmuch as the course was so rapid, the patient dying only 18 hours after the paralysis began in the legs. He had for 36 hours intense backache, obstinate constipation, much agitation and anxiety; during the night he was up to urinate three times without noticing any weakness in the legs although he had then some pain in them. He could not empty his bladder, and

when he arose to try it again about 7 or 8 in the morning, he fell beside the bed helpless. At 11 a. m. I catheterized him and made an examination which showed a complete paralysis of the muscles below the diaphragm; the reflexes were also absent here. At 4 p. m. respiratory embarrassment began and respiratory paralysis was complete at 7; he was kept alive by artificial respiration until midnight begging for air when it was inefficient; when the end came paralysis was complete excepting in the face, and here it was beginning.

The rapidity and the symptoms of this case are so like Landry's paralysis that one is suspicious of the identity of these diseases.

No.	Locality	Physician	Month	Age	Sex	B.	Paralysis	Results
1	Mundy	Pierson	July	10	m	c	Not stated	Transitional
2	"	"	"	12	m	c	Lower extremities	Transitional
3	"	"	"	10	f	..	Lower extremities	Transitional
4	"	"	"	8	f	c	Bulbar	Part. recov.
5	"	"	"	12	f	c	Rt. arm and leg	Part. recov.
6	"	"	"	6	m	c	Lower extremities	Tot. recov.
7	"	"	"	5	m	c	Not stated	Transitional
8	"	"	"	5	f	c	Not stated	Transitional
9	"	"	"	13	f	c	Trunk and low. ext.	Part. recov.
10	"	"	"	14	f	c	Rt. upper and low. ext.	Part. recov.
11	"	"	Aug.	7	f	..	Lower extremities	Tot. recov.
12	"	"	"	3	f	c	Lower and one upper	Tot. recov.
13	Otisville	Jenne	July	5	f	c	Low. ext. and bladder	Part. recov.
14	"	"	Aug.	22	m	c	All extremities	Part. recov.
15	"	"	"	3	f	c	Acute ascending	Death
16	"	"	Sept.	32	m	c	Bulbar	Death
17	Millington	Garvin	June	4	f	d	Left upper extremity	Recovery
18	"	"	July	24	m	d	Ascending	Death
19	"	"	Aug.	19	m	c	Bulbar	Death
20	Flint	Orr	July	9	f	d	Lower extremities	Part. recov.
21	"	Tupper	Sept.	7	m	c	Lower extremities	Part. recov.
22	"	Stewart	Aug.	6	f	c	Lower extremities	Tot. recov.
23	"	McGregor	Sept.	2	m	..	Left lower extremity	Part. recov.
24	"	Benson	Aug.	12	m	c	Lower extremities	Part. recov.
25	"	Rumer, E. C.	"	4	f	..	One lower extremity	Part. recov.
26	"	"	"	6	f	..	One upper extremity	Part. recov.
27	"	"	"	9	m	..	One lower extremity	Part. recov.
28	"	Knapp	Sept.	3	f	..	Left lower extremity	Part. recov.
29	"	"	Oct.	17	m	..	Both lower extremities	Part. recov.
30	"	Manwaring	Aug.	22	m	c	Acute ascending	Death

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## A PLEA FOR EARLY DIAGNOSIS IN CARCINOMA OF THE UTERUS\*

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If we will bear in mind that cancer at the beginning is a local disease, that sometimes it is microscopic and cannot be seen, that at some time in its course it is the size of an ordinary pea, that at some time in its course it is only as large as a pigeon egg and limited to a definite area, then we must all admit that cancer can be thoroughly removed, if we make the diagnosis early enough, and that the terrible local and constitutional results which follow when it has spread, and the final death of the patient, can be prevented by an early diagnosis and early removal of the disease.

The great crusade which has spread over the land to check the inroads of tuberculosis, should now be followed by the medical profession taking the initiative for a crusade against cancer, by educating the people to seek relief from those symptoms that are the first manifestations of the disease.

No doubt the medical men often sin themselves by neglecting cases, by giving medicine or simple treatment without a most thorough examination and watching of the case. Of course, physicians are very busy sometimes, and a woman may come complaining about some uterine symptoms, and he may put her off by suggesting some simple treatment. She may go home, and may use this for weeks and months, but finally return with aggravated symptoms, and then, on a thorough examination he may find the case to be beyond all human help. The lack of thoroughness in investigating

such cases is a great error of the medical profession.

*Every woman in the cancer period of life showing symptoms should be most carefully and repeatedly examined* instead of being allowed to use a little wash or taking some medicine.

When I talk about the cancer period of life I mean over forty, but cancer occurs not infrequently a good deal earlier. I have seen it as young as twenty-four and twenty-five years. Hence thorough investigation should be insisted on in *all cases at all ages*, but especially those over forty.

The first and probably the most common symptom complained of is an excessive menstrual flow and the vicious notion held by the women (and I am sorry to say often by the physician) that, as a rule, it is a symptom of the menopause. *This wrong view should be combated at every opportunity.* A woman with a healthy uterus has no more excessive flow at the change of life than at any other time, therefore, the first great point is that a woman during the cancer period of life who flows more than usual must be thoroughly examined. This also applies to spotting between periods, after use of syringe or bowel movement.

The second principal symptom is discharge. A woman who has been free from this and at this date is taken with a discharge coming on gradually, and increasing, and especially causing irritation, ichor, itching, and pain, presents a very suspicious case. I have seen women, having this for months and even years, with an apparently healthy uterus

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at first, who have finally ended with cancer.

The third symptom that I lay a great deal of stress on, is loss of weight and debility. These hold good in malignant growths, no matter where situated, but indicate already an advanced state of the disease.

All the other symptoms are of secondary importance, as you find them in different chronic and acute conditions. I refer to pain in the pelvis, the back and side, disturbances of the digestion, the bowels, etc. It is not necessary to occupy your time mentioning them all.

How can the physician make a positive diagnosis early? First, by careful investigation of every case. If you are honest and conscientious with a woman who is in the cancer period of life, and she casually mentions that she has some of the symptoms mentioned above, even if they are slight, you must immediately impress her with the need of thorough examination. If you are busy that hour you can make an appointment the next day, or as early as possible when you can thoroughly investigate her case. This question of women not submitting to examination from modesty and all that, must be swept aside. A gentleman and a physician who is enthusiastic and earnest about his work will have no trouble to get the consent of the patient, even old maiden ladies. If there should be difficulty or pain connected with it, an anesthetic should be administered, but the examination should be *thorough*.

If you find the cervix large and hard it is very suspicious. If there is a discharge or excessive hemorrhage, a curettage should be done as thoroughly as possible, and in women who have had children, it can usually be done gently and carefully without an anesthetic. I always keep some two to four dram vials in my office, into which I put the scrapings and examine them or have

them examined microscopically. We must depend on the microscope, and although the microscopist might once in a while make a mistake just as we do, still we must trust him, and if he says it is not malignant we must treat the case by local application. But if the hard indurated cervix does not subside, or if the discharge continues in spite of treatment, we must again curet and again have it subjected to microscopic examination. Yes, even a third or fourth time. Malignancy is sometimes found later when it did not exist at the first examination.

If we have a case with a virgin uterus, and a discharge or profuse hemorrhage, we will often have great difficulty in making the diagnosis. Such a case should be examined under an anesthetic, the cervix thoroughly dilated and then the fundus curetted, being careful to go over the whole lining membrane with your curet, paying special attention to the cornu of the uterus. There is sometimes a place, a centimeter in size, that the curet does not reach, and the case is dismissed as not malignant. Only later, when the disease has advanced, is a correct diagnosis made. I have made this mistake myself, and, therefore, I insist on a second and third examination and curettage, if the first should give an indefinite microscopic diagnosis.

If the medical profession will be thoroughly imbued with this great idea of thoroughness in the investigation of early diagnosis, and prompt removal of local cancer, many cases will be saved from the pangs of hell and an early death, because there certainly is no disease so terrible as cancer.

*No physician has a right to locally treat such cases for months and months to see if he can reduce a swollen uterus or cure a discharge unless he knows positively what the trouble is.*

If a physician is not sure himself he should ask counsel. If he has not the time he can send the patient to somebody

who has. If he has not all the facilities required, he can send her to a well equipped hospital, where all the facilities are at hand to make a correct diagnosis. He will always be the gainer and not the loser by this course of action. A man who establishes in the community a reputation of being thorough and of always being correct in his diagnosis will establish for himself an enviable reputation.

But physicians are not to blame. Women often conceal their symptoms. The people are ignorant and stupid. They have had it drilled into them for generations, that profuse menstruation with those other symptoms at this time is a proper thing, and they must expect pain, backache, and all kind of trouble during the menopause.

What shall we do with them? That is where we must get the crusade spoken of. Not the crusade of the sword or the spear, and the banner or battle, but with the gentle crusade of the pen and the press; of the kind and encouraging word from mouth to mouth. We must train and educate the women of this country so that they will seek early aid, when they are suffering with such suspicious symptoms.

In order to do this it seems to me we should get out a cancer pamphlet. It ought to be published in every lay paper in the land, yes it should be advertised and published at least every year, and the day to be known as "cancer day." A circular should be issued and put into the hand of every woman of the land. Every County Society should have such a circular published (or distribute them at least) so that the laity will understand the early symptoms of cancer and that cancer can be cured by an early removal.

What holds good of cancer of the uterus can also be applied to cancer anywhere else. All tumors, swellings or growths, found anywhere in the body, should be promptly investigated, and if necessary removed.

I would suggest a circular something like this:

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**TO THE WOMEN OF THE LAND; WHAT  
THEY SHOULD KNOW ABOUT  
THE EARLY RECOGNITION  
OF CANCER.**

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The change of life or menopause comes on gradually, rarely suddenly. It is not preceded by excessive flowing or discharge or pain in a healthy woman.

By cancer period is understood those years after forty, although rarely it may occur earlier.

The first symptoms of cancer are:

1. Profuse flowing, even if only a day more than usual. Flowing or spotting during the interval or after the use of a syringe or the movement of the bowels.

2. Whites or leucorrhea if not existing previously. If existing, but getting more profuse, watery, irritating, or producing itching, it is a very suspicious symptom.

3. Loss of weight if no other cause is apparent. Pain in the region of the womb, back, or side.

If any of the above symptoms occur after the age of thirty-five or forty, a woman should seek prompt relief and insist on thorough investigation of the cause and prompt treatment.

Cancer is always at first a local disease and can be removed if early recognized, and an absolute permanent cure brought about.

## APPEND ICITIS\*

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Painesdale.

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subsequent attack might be more severe and rapid in its course, ending in death. Whether to operate during the attack or to wait for the interval was a fruitful cause of discussion; most surgeons tiding their patients over the attack if possible, only to find, not infrequently, that the interval never came; or if they operated after the symptoms became grave the patient's chances were lessened by their lower vitality. As a result there was a higher mortality, and the patients were more timid in consenting to an operation at a time when conditions were best for a successful outcome.

At the present time the predominating opinion is to operate at once in all cases when seen at the onset of the attack, and by an ever increasing consensus of opinion medical treatment has been relegated to the background. One argument against waiting for the interval to operate, in my experience, has been that very commonly the patient on getting well would refuse an operation, preferring to take his chances on another attack, rather than submit to the knife, and I think it may be stated as an axiom that no one is safe, having had an attack of appendicitis, however mild, until the removal of the offending cause. In the hands of an experienced and competent surgeon, with proper aseptic conditions, the greatest safety for the patient lies in an immediate operation if seen at the onset, or before perforation, while the pathology is still largely confined to the appendix, and the unruptured appendix occasions far less anxiety to us when in a bottle than when left in the abdomen, and we in the dark as to

One of the first in America to clearly define the relation of the appendix to inflammatory conditions in that portion of the abdomen was Dr. Fitz, of Boston, who in able papers published in 1886, and again in 1888, demonstrated that typhlitis, perityphlitis, and perforative appendicitis had practically the same cause and symptomatology. Dr. Sands, of New York City, was the first to operate for it in this country. Since that time no disease has been more written upon, nor none so frequently discussed at medical meetings. The recognition of it in its early stages has become more general, its pathology better understood, and its treatment simplified, and more successful.

The mortality following operations for it, at first high, has become so low that surgeons now report their cases by the hundred with no deaths. As a result of the increase of hospitals throughout the country, and a more perfect asepsis, a mortality as low is now obtained in nearly every locality as in the larger city hospitals.

Operations for it have become so frequent that the public have been inclined to look upon it lightly and ridicule the profession, and physicians have been heard to accuse others of operating needlessly, when in their opinion equally good results could be obtained with less heroic measures. It was long ago shown, however, that recovery from a first or second attack did not mean cure, and the patient was frequently not well nor free from pain in the interval, and a

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\*Read before the Upper Peninsular Medical Society at Marquette, August 26, 1908.



the course of the disease within the next twelve hours. No one's prognostic acumen is keen enough for him to say that an attack, even though mild, may not present an entirely different picture at his next visit, with perforation and a well-developed peritonitis. It has been my experience in the last two years to have two such cases, which at my first visit were not serious, each having tenderness on pressure, and but slight muscular rigidity, but no alarming symptoms, have a ruptured appendix, great pain, a distended and hard abdomen, when I saw them the next morning. Both were on the Ochsner treatment, one in the hospital, because they refused an operation. I have had other similar cases, and all have, and while such dangers may present, I do not believe we are warranted in deferring an operation.

The Ochsner treatment is probably responsible with many for postponing operating, and some physicians who do not feel safe to operate themselves, yet unwilling to turn the case to some who can, excuse themselves on the ground that so able a man as Dr. Ochsner with his immense experience advises that course. I do not believe that he meant that treatment to be applied in the early cases, but rather at that time when the inflammation has already extended beyond the appendix. I believe in the Ochsner treatment, and use it, but only in those cases where I can not get the consent of the patient for an operation, or where the conditions for safe operating and proper after care are not at hand, but I also agree with the statement of Dr. Morris, of New York, made at the last meeting of the American Medical Association, that the Ochsner treatment was one of the greatest principles in surgery, but that as generally applied in New York it was damnable. I do not believe it possible to completely carry out this treatment in any home unless there is present a competent and

conscientious nurse. Too often it is only partly carried out; but when rightly used no doubt many cases may recover from the attack who would not on any other non-operative treatment. Whether to operate on a case when there is present at our first visit, evidence of the inflammatory process having spread beyond the appendix with a mass of exudate, or a beginning abscess, is a question upon which the profession are not united. Each of these cases calls upon the physician for greater experience and surgical judgment, and in deciding, each case should be judged by itself.

In the series of cases which I wish to report there have been a number of this kind and we have operated on every one as soon as diagnosed and have no reason to regret our course, and I believe in the majority of such cases that to be the safer policy, depending in large measure upon the after care. When, for any reason an operation is not done at once the leucocyte count will be of great aid, frequently giving a more correct picture of the condition than the clinical signs, as a rapid and marked increase in the white cells may develop with the clinical symptoms not aggravated or even milder. My experience with it extends over several hundred cases in my own practice and that of my colleagues of the Copper Range staff and of the Calumet & Hecla staff during my service there, and I have frequently seen the benefit of it.

I wish to refer to the operative technique and after-care of the cases operated upon by myself and my assistants at the Copper Range Hospital, since its opening in April, 1906. I have not expected to bring out anything new, but rather to emphasize certain points that in my experience have seemed important, and upon which a successful result may very much depend. The series now includes 79 cases operated on consecutively, with one death. The fatal

case was a young girl eight years old, referred to me for operation by Dr. Scott, of Houghton. The operation presented no unusual difficulties, and death was due to hemophilia. Though the wound was closed in layers there was a severe and constant oozing from it. It was re-opened down to the peritoneum and no bleeding point found, but the oozing from every part, which firm closure failed to control. There was also severe epistaxis, and ecchymoses in the back and on the legs. Death finally occurred on the eighth day. This case was reported to the Houghton County Medical Society, a year ago.

The operative technique we have used has been as follows: Ether has been the anesthetic in every case. Thorough asepsis has been followed in every detail; in the preparation of the patient's abdomen, the doctors' hands, suture material and dressings. Rubber gloves have been worn, carefully drawn over the long sleeves of the operating gowns, and the hair and face of the operator and his assistants covered. The incision in most cases is the McBurney, though in women, when an examination of the ovaries may be desired, the right rectus is chosen. The appendix is dealt with by the Mayo method, a ligature of catgut at its base, the stump invaginated by a purse string of celloidin linen and reinforced by a few Lembert sutures, and the stump of the meso-appendix brought over and anchored, leaving no raw surface. The incision is then closed in layers with No. 2 catgut, and the skin edges brought together either by a subcuticular catgut suture or buried silver wire. The dressings are simple, a few gauze sponges held in position by three strips of adhesive plaster.

In the cases where there is an abscess or a general peritonitis, the appendix is always removed if possible, by not too long prolonging the operation, and only twice have we failed to get it, deeming

breaking up of adhesions and further search unwise. We have used drainage in very few of the septic cases, though where there is a distinct abscess cavity a rubber drainage tube is always introduced. In the others, however, where there is pus, inflammatory exudate, and no attempt at walling off, we have in some of the cases closed the wound without any drainage. All of these had an uneventful convalescence, except one, a five-year-old child, who was very unruly. This case recovered. I believe drainage may be limited to those in which there is a very large amount of thick pus. Our series of cases is far too limited I know to prove any rule, but I believe drainage when not used judiciously, often does harm. In the cases of general peritonitis, with the abdomen more or less filled with pus and the intestinal loops agglutinated, I question if the tube removes much of it, and gauze less, and believe that sometimes such cases, if the wound is closed and the patient set up perfectly straight in bed, may stand a better chance of recovery.

We have made but little effort to remove the pus at the time of operating, and the intestines have only been handled enough to remove the appendix. Flushing of the abdominal cavity with hot salt solution I consider bad practice, as the toxins are by it rendered more absorbable and the already poisoned patient is overcome by toxins. All these measures, also, by prolonging the operation added to the increased shock from handling the intestines, decrease the lowered vitality of the patient, and lessen his chance to a large extent. For several years it was my practice and that of others in every case of suppurative peritonitis to make a free incision, to mop out all the pus we could, breaking up adhesions to do so, then flush the abdomen with salt solution, and finally to carry strips of gauze to the seat of

the appendix and into the pelvis, in several cases making another incision for better drainage. Such operations were necessarily prolonged, and the patient returned to bed in great shock. I do not remember any of those cases having recovered. We have had four such cases in this series all of whom have recovered. The operations, by being briefer, have occasioned less shock and the patient has been spared a maximum of vitality to aid his recovery.

One of these cases I will refer to: Mr. P., a young man, and a miner by occupation, called me to attend him February 1, 1907, and a diagnosis of appendicitis was made and operation advised. He refused, however, and the Ochsner treatment as far as possible at his home was carried out. When I saw him next, the following morning, I found him in great pain, the abdomen distended and hard, and all the symptoms of peritonitis. At operation pus was found in the abdomen, the intestines partly covered with inflammatory exudate, the appendix swollen, ruptured, and free from the protection of adhesions. It was readily removed and the wound closed without drainage, and the patient sat upright in bed on removal from the operating table. There was a skin infection in this case, which caused a rise in temperature for a few days; it was not deep, and was drained by removing the lower suture. Otherwise his convalescence was uneventful, and he was up and about the ward in the third week, going home on the 21st day and returned to his work within the month.

The after treatment of all cases I consider of great importance. The patient is always put in the Fowler position, the head of the bed being elevated 22 inches. Nothing is given by the mouth, not even water, for the first 24 or even 48 hours, but four ounces of salt solution is given every four hours per rectum. Morphine

is given hypodermically after the patient awakes, if needed for pain or restlessness. Very rarely is a cathartic used until the bowels have first been moved by a simple enema, which in most of the cases has been given on the fourth day. We have had practically no post-operative nausea or vomiting, and no trouble from gas in any case except one, a man aged 56, who had symptoms of paresis for two days. Most of the cases sit up on the fifth day and go home on the seventh or eighth day. In my judgment the Fowler position is the most important point in the after-treatment of our abdominal cases, and the recovery of some of the more serious ones, with freedom from post-operative vomiting, distress from gas, and the very comfortable convalescence is due largely to it. The patient is easily and comfortably kept in that position, and only one of over 150 cases in which we have used it has complained, and only once were we unable to keep the patient's position so for a few hours on account of the pulse rising, but I believe that patients in that position have less shock. By favoring drainage into the pelvis, toxic material is more slowly absorbed and there is less danger of the patient being overcome by it. Even in non-septic cases the irritation of the peritoneum by handling the intestines favors serum being thrown out, or there may be a few small blood clots which are absorbed in this position. I have noticed for some time the freedom from vomiting in this position, and have concluded that it was the cause. That I might have facts to prove my statements I asked my head nurse to go over all the history sheets of last year in regard to vomiting after all cases operated on. This included 100 cases, and I have the following interesting figures:

There were 52 cases who were not in the Fowler position, which were non-abdominal ones, of these there was free



emesis in 39 the first 24 hours after operation, none the second 24 hours. In ten cases there was slight emesis the first 24 hours, and in three no emesis; 48 cases were in the Fowler position with the following results. In 44 cases there was no emesis at all, in two it was free for 24 hours, and in two for 48 hours. The cases kept in the Fowler position were the ones in which the operation would as a rule be longer and in which vomiting would be most likely.

The relation of chronic appendicitis to gastric symptoms was strongly impressed upon my mind at my first visit to the Rochester clinic two years ago, at which time I saw a man giving the history of intense pain in the region of the stomach, with vomiting and a loss in weight of 40 pounds in a few months. Before operating, Dr. Will Mayo did not make a positive diagnosis, but suggested that the appendix might be the cause of the attacks, though there were no symptoms pointing to it. Through the usual incision he brought out the stomach and carefully examined it, also palpated the gall-bladder and pancreas, but found nothing pathologic with any of them. After closing that incision he made another over the appendix, and removed it. It was long, bent on itself and bound down. I never heard what the result of the operation was, but Dr. Mayo assured us the man would be free of his attacks in the future. Last winter we operated on a man with the following history: The year previous he had an attack of appendicitis which kept him from work three weeks, but for which he was not operated. Since that time he has had no subsequent attacks, but has had much trouble with his stomach, with pain and discomfort after eating; he has been forced to stay from work a day or two frequently, had lost strength and was miserable. Medication had relieved his dyspeptic symptoms for only short periods. An exam-

ination showed tenderness on pressure over the appendix, and its removal was advised. When I saw him last, several weeks after the operation, he had gained flesh, could eat anything, and presented an entirely different picture, and he has remained well.

I have been told on several occasions by people who have had their appendix removed, that a more or less persistent indigestion which had troubled them before the operation had disappeared after the removal of the appendix. I have operated on two cases in which the symptoms were entirely gastric, in one more that of dyspepsia, in the other severe pain in the stomach, an analysis showing only slight hyperacidity, but neither case giving the history of previous appendicitis. In both cases were all symptoms relieved by an appendectomy. In one of the cases having the severe pain I examined carefully the stomach and gall bladder through a high incision, and they were both normal, showing that the pain was not due to gall stones. I believe such cases as these, giving a history of indigestion, or severe pain in the stomach, with a tendency to chronicity and only temporary relief from drugs and dieting, with no definite symptoms of ulcer or gall stones, particularly if there be tenderness at McBurney's point, which may be elicited when there can be obtained no history of an attack of appendicitis, will be afforded relief by the removal of the appendix, and it will be considered good practice to advise it. The future will show little use for the stomach specialist, and that all obstinate cases of stomach disorder should have an exploratory operation, and that many of them will be given relief by the removal of the appendix and less discredit will be brought on the profession.

In conclusion I would like to emphasize the following points in the management of appendicitis.

1. Immediate operation when seen early in the attack.
  2. Thorough asepsis.
  3. Closure of wound in many cases, formerly thought necessary to drain, and
  4. The Fowler position in every case.
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## ANESTHETICS, WITH ESPECIAL REFERENCE TO SOMNOFORM\*

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GEORGE C. HAFFORD, M. D.,  
Albion.

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From the earliest ages of antiquity man has sought continually for means of relief from pain. Running all through medical history there is a constant reference to the abolishing of pain, and among the ancients there were many fairly successful attempts in that direction. Poppy, henbane, mandragora, etc., were used to deaden the pain of executions and surgery. Herodotus speaks of it. Amputations were done in China, A. D. 220, under hashisch. Pliny in the first century of our era, wrote of the custom of giving drugs to prevent pain in cuttings and puncturings. There are hosts of agents from hypnotism to puffballs, which will produce anesthetic sleep or local anesthesia, but at the present time the general anesthetics are practically limited to chloroform, ether, and gas. These three, discovered many years ago, and, singularly enough, either discovered, brought forward, or demonstrated by dentists, have not been displaced.

New ones have been sparingly advanced, ethyl chloride, ethyl bromide, pental, bichloride of methane, ethyloform and a great many others, among which we must not forget Abbott's H. M. C. tablets; each one introduced by some one who happened to be an enthusiast in regard to it, but none standing up as are

the old original three. You perhaps know the history of the principal anesthetics. Ether was discovered in 1540, used in 1803 by inhalation for the relief of the cough of tubercular patients. In 1830, a negro boy was anesthetized. In 1842 Dr. Long used it successfully in excising a tumor, and received the munificent sum of \$2.00 for the work. In the same year Morton gave it for the extraction of a tooth. In 1846 he demonstrated it in the Massachusetts General Hospital, and it became an assumed fact as an anesthetic.

In 1847, chloroform came into the field for the same purposes as ether, having been discovered in 1831 by three investigators in three different countries. But the spectacular career of ether and the prominence it had obtained made chloroform less of a wonder, and it never obtained the favor of the former, especially in the old world. In 1779 the intoxicating properties of nitrous oxide gas were discovered by Humphry Davy, then a young practitioner. In 1818 Faraday observed that the vapor of ether produced effects similar to that of nitrous oxide. In 1844 a traveling lecturer gave an exhibition of gas. It was then used in Hartford to some extent, but at a demonstration calculated to prove its worth it was improperly given and was deemed a failure and was soon overshadowed by the prominence that was then given ether, only to be studied,

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perfected and used for minor work in later years.

Since this period the greatest changes and discoveries among other drugs and drug properties have been made. Medicine has advanced by enormous strides along other lines, but practically little new has been done in anesthetics, except to learn more perfectly their action and better methods of using them. Although the increasing interest in the various methods of using anesthetics is interesting, and shows the development of the art into almost a special department of medicine, it would seem only natural that newer and possibly better remedies might be discovered along the line of anesthetics, as well as along other lines during this long period.

Lately my attention has been called to the new anesthetic, somnoform, and so favorably have I been impressed with its several good qualities; its apparent safety; its rapidity and pleasantness; its freedom from all unpleasant after effects, that I wish to call the attention of the section to it. I am well aware that the small number of cases I have personally to report does not count for much, but they have been enough to make a profound impression on me, and I hope that others will at least investigate, feeling sure that if they do follow it up they will be satisfied with the results obtained. It is with some hesitation that I speak about somnoform. A proprietary preparation as a rule we "fight shy of;" "we have to be shown." However, many articles of great merit have been introduced by this method.

Probably if we were to ask nine out of every ten of the physicians of this country, "what is the best anesthetic," the reply would be "ether." There is no doubt that ether may be the best in many cases, but the best anesthetic is always the one best suited for the particular case in question, and so no anesthesiologist should become wedded or tied

down to any particular kind. Is an anesthetic safe? That depends primarily on who gives it. Some one has said that in certain lines man is born an adept, not made; this is certainly true with the anesthesiologist, though practice and experience are essential. He should be able to devote his whole time to this work. His is fully as important a position as the operator's or the assistant's. He should have time to study the patient, so as to be able to decide which anesthetic is best for each case.

Somnoform is composed, as stated by the manufacturers, of ethyl chloride 60%, methyl chloride 35%, and ethyl bromide 5%. It is a transparent and nearly colorless liquid, usually coming in glass tubes or capsules containing 3 or 5 c.c., but can be obtained in larger containers, when much is to be used or where it is not necessary to transport it from one patient to another. When these capsules are broken a very volatile gas results, which when inhaled produces the narcosis. It was discovered in 1895 by Dr. Rolland, of Bordeaux, France. Dr. Rolland is dean and professor of anesthetics in the dental school there. He had been investigating and experimenting for several years, principally with different combinations of old and new anesthetics. Since this time its use has become quite general, but more especially among the later dentists. Comparatively few surgeons, so far as I know, at least in this country, have had their attention called to it. It may be thought by those who have been using ethyl chloride that that is all there is to somnoform. I have been using the former for minor operations and preliminary to other anesthesia for three or four years, but I can freely say that there is a vast difference between the two. Somnoform has an even more prompt action, said to be due to the rapid diffusibility of the methyl chloride. The anesthesia is more rapid, more prolonged and there is a period of



analgesia following the return to consciousness during which short operations can be completed. Its inhalation is more pleasant. It leaves no unpleasant after effects. Compared with nitrous oxide we find it more pleasant, fully as rapid, giving no cyanosis, longer anesthesia, and less often the excitable period; no heavy or cumbersome apparatus to carry around. The frequent rigor, struggling, and cyanosis of gas are very disquieting to an operator who is not accustomed to its use. Nitrous oxide causes first a rise of arterial pressure (from vaso-motor stimulation) then a fall, (vaso-motor depression) a slowing of the heart, then a more rapid beat. This, according to Hare, is due to a moderate asphyxia. The use of nitrous oxide with oxygen or with ether has its place, and a very important one, but again the present cumbersome apparatus makes it unavailable in the class where it must be used in the home.

Somnoform seems to me undoubtedly safer than chloroform and ether, and fully as safe as nitrous oxide, which has always been called the safest narcotic we have. So far, its use has been mostly confined to minor work requiring short periods of anesthesia; there seems to be no reason, however, why it should not be used for more prolonged work. It is more pleasant, consequently easier to inhale; is very rapid, the patient comes out quickly with but little nausea or unpleasant after-effects. It has been used for 30 minutes with practically no change in the pulse, respiration, or blood pressure. In ether there is admitted a slight loss of hemoglobin, a moderate polycythemia from blood concentration, and slight increase of leucocytes, these changes lasting about 24 hours. In chloroform these changes are similar, but more marked and persist longer. A recent author has said "anesthetics, especially chloroform, can produce a distinct effect on the cells of the liver and kidneys and on the mus-

cle cells of the heart and other muscles, resulting in a fatty degeneration and necrosis similar to phosphorous poisoning." Chloroform is usually charged with about one death in two or three thousand cases, though the rate is probably less now. The old high rate which was given both it and ether in the civil war, we of course now know should have been divided with shock as a cause. The latest figures I have found are from Bevan and Lexer, who gave in 524,507 cases of chloroform one death to 3,258 cases and in 31,473,821 cases of ether one death to 14,987 cases. There were 90 published cases of death from chloroform in England in 1897. There is a vast difference between deaths under, and deaths from an anesthetic, but this is taken little into account when we look up the statistics. For instance, in 1847 arrangements were made in the Royal Infirmary in Scotland for the demonstration of chloroform. For some unknown reason the anesthetist, Simpson, did not appear, and the operation was completed without the anesthetic, and the patient died. Had this case died while under the anesthetic it might have been the death blow to that drug. Two days later the test was completed on another patient with great success. A case somewhat parallel to this occurred in Columbus recently. A woman who three weeks before had taken somnoform with success, came in to have a piece of root extracted. She spoke of a feeling of dread and hated to take the somnoform; as the operation was trivial the dentist did not try to use an anesthetic, and she died in the chair. Such cases simply prove that large numbers of tests are needed before any reliable statistics can be had.

Experiments show that to get the same effect as chloroform on the heart it took 12 times as much ethyl bromide, 48 times as much ethyl chloride, and 192 times as much alcohol. I have found no such experiments comparing it with somnoform.

The amount of chloroform or of any anesthetic in the blood bears no relation to the anesthesia. It depends on the quantity which acts on the central nervous system, hence the danger of giving a large quantity is the danger of getting an excess in the blood and getting a cumulative effect. Those which are rapidly diffusible show their action sooner, and we are not so apt to get these effects. Such ones are somnoform, ethyl chloride, gas, etc., but in the first two the narcosis is produced independently of asphyxia; this cannot be said of nitrous oxide, hence we should naturally conclude that the use of the former agents are more physiological and now if this claim of non-heightened blood-pressure continues to be substantiated it would seem to be safer than gas for old people with hardened arteries. We await only more confidence to use it in longer operations.

There is much controversy as to whether the heart is ever directly affected in either ether or chloroform poisoning, or whether the dangerous symptoms are not always due to failure of respiration. The evidence is of a very conflicting nature, and it is impossible to consider the question solved. Ether is a cardiac stimulant, and we would expect an increased blood pressure, but what we get in both ether and chloroform is lowering due to vagus inhibition. We all know the reports of the Hyderabad Commission were not satisfactory to a great many who believed and still believe that in death from chloroform the heart fails first, and that in ether anesthesia the respiration fails first.

In a report by Dr. Turnbale of deaths from chloroform and ether since the above commission, he concludes that the blood is changed in character, lowered in pressure, with weakened heart action and structural changes. Dilatation of the heart occurs at all stages and on both sides of the heart. In 13 cases out

of 43 there was cardiac failure first. The heart may stop first with ether, but usually it is the respiration, these changes are liable to follow the first act of respiration. In 1896, there were reported 30 deaths from chloroform in dental chairs. Ether is estimated to be seven times less dangerous than chloroform.

In regard to somnoform, I have been able to find but little in either text books or current literature, but most of what there is is favorable. The Long Island Society of Anesthetists discusses ethyl chloride quite fully, and speaks favorably of somnoform, but little seems known except by those few who have made a study of it. Some English works speak unfavorably of it, but give no experience with or unfavorable reports of it. Thus Luke says: "There is no advantage over ethyl chloride and its popularity is waning." Rose and Carliss state, "Somnoform has no advantage over ethyl chloride and is probably less pleasant to take and leaves more after effects." I think these statements show a somewhat unreasonable prejudice. Luke says also that gas anesthesia is not due to asphyxia, though most Americans assert that it is. It seems proven that gas, even though given with oxygen, displaces the latter in the corpuscles, and thus gives the same asphyxia as if there was an absence of oxygen. Patton says, "Somnoform is supposed to be governed in its entry, transit and exit from the body by much the same condition as those affecting the action of oxygen. It increases arterial tension and rate of the heart, is said to produce changes in the neuron which vary in different portions of the same brain." He quotes Gray of Melbourne, and Cole, who speak favorably of it.

Compared in any other way except duration of anesthesia, somnoform seems to me without a doubt far ahead of any other anesthetic we possess. As to safety it is claimed that there have been two

deaths in 800,000 anesthetics, and that these were not normal cases. One of these deaths occurred in Grand Rapids, and one in Rockford, Ill. I have not been able to get many particulars regarding these cases, and doubt if they have been reported. One died one-half hour after the operation; is said to have had spells of collapse before and to have made previous attempts at suicide. The other case died in a dental chair. Other cases of death in this country reported as somnoform are claimed to be from ethyl chloride. Two deaths also from somnoform are reported across the Atlantic.

Rarely ever are there symptoms which are disquieting when one learns to know the agent. Dr. Rolland reports 25,000 administrations without an unpleasant symptom. One would here make a little allowance for the natural enthusiasm of the inventor; what would not be a disquieting symptom to him might be very much so to one less acquainted with the action of it. But when we read of 50,000 administrations given by dentists and others all over the country, many of them men who no doubt have had no special education in anesthesia, perhaps who have never seen it used before, when we get this kind of a report from all kinds of operators without a death, and with almost universal praise, it seems that there must be something extraordinary about it. Ought we not to "sit up and take notice?"

According to the manufacturers up to March a year ago, these four deaths have occurred in 1,000,000 administrations to patients from 2 to 80 years, and with no manner of classification of what the cases were or what kind of men had been using it. Since then I have been unable to find any deaths recorded. During this time there have been 18 deaths recorded in the journals from ethyl chloride. The latter, by the way, is not so very new, as it was used first in 1848. In 1880 a

commission from the British Medical Association condemned it, and in 1895 re-introduced it. It does not, as a rule, cause complete muscular relaxation.

These may sound like extravagant statements; some of us dimly remember to have read of occasional fatal cases, to have heard that it was so extremely rapid that it was correspondingly dangerous, to have been told or to have understood that it was nothing but ethyl chloride, etc. Only strong and repeated assurance induced me even to give it a trial, and when I finally did, in the first few cases the least uneasiness on the part of the patient was a cause for alarm and coincident uneasiness on my part; conditions to which I would hardly give a second thought in chloroform or ether would frighten me in this, but I finally came to have much confidence in it and to think that the few bad cases that I had read of, might have, as the somnoform people claimed, been widely published and made much of by those who were interested in other anesthetics. Dr. DeFord, who has recently published a book on general anesthesia, gives great praise to somnoform. He reports only ten cases of nausea in 4,000, where blood is not swallowed. Dr. C. M. Paden, who has made a considerable number of laboratory experiments with somnoform to ascertain its exact action, finds in short that it is not a depressant. The pulse and respiration are at first stimulated and then remain normal even after extended use. Heightened blood pressure by nerve stimulation during anesthesia returns immediately to normal after cessation of the stimulant. In animals, where it was pushed to the limit, death was always from failure of respiration, though often enormous amounts would have to be used, and artificial respiration would usually bring the animal to life, the heart beating for some time after the respiration had ceased. After 30 minutes of deep anesthesia the animals



were usually in a satisfactory condition. In experiments on himself (and all these experiments were made in the presence of a number of scientific and non-interested men) using the sphygmomanometer instead of the direct blood pressure from the femoral artery, all the phenomena seemed to be repeated.

In short, then, we seem to have this: a safe article; a very rapidly acting one; one giving a longer anesthesia than gas and one which can be continued, but the length of time being unknown; one which can be transported easily; one causing practically no nausea or unpleasant after effects; one which we can use in more different conditions than any other; one which is par-excellence to use preliminary to one of the other agents.

There is a special inhaler made for somnoform which is very simple, and is so arranged that the anesthetist can at will regulate the amount of air the patient is getting. The face-piece is so arranged that it can be easily detached from the other parts, and used to continue with some other anesthetic if wished.

### Reports of Cases.

Baby C, female, aet. 4, abscess cervical gland.

Feb. 18, '08. Had to use two 3 cc. tubes as the face was so small the mask did not fit it, allowing too much air. Narcosis was perfect; opened a large abscess, washed and drained it and dressed the neck. Child came out quietly, had no nausea or nervousness; knew nothing of the work.

Feb. 19, '08. Mr. T. P., aet. about 40, given in dental chair. One tube 3 cc. taken nicely though a little nervous. Six teeth extracted without pain or trouble; probably we could have gotten more had we known enough to know that we were not hurting him. After a few moments gave another 3 cc. but only managed to get one root and this he claimed with pain. Was very nervous with the last tube and did not breathe well, but exhibited no bad symptoms; no nausea.

Feb. 19, '08. Mrs. G. B., aet. about 30. Without an assistant 3 cc. was given and an alveolar abscess from a diseased tooth was incised. Not quite all the amount was used, thinking that she

was fully under. She cried loudly, but said there was no pain and that she knew nothing of it. She recovered immediately, with no trouble or nausea and felt well. This was an extremely nervous person, has had a great deal of pelvic trouble and a major operation and is a morphine habitue.

Same date. Mr. C. W., aet. about 25. This patient had a large axillary abscess and another on the arm, both following vaccination. He had been suffering great pain for two nights and was very nervous from loss of sleep. In addition he had just eaten a big supper. Just as he was going under, the assistant allowed him to knock the inhaler on the floor. It came apart, and before I was able to get it together he was out. There was a dim light in the evening and a crowd of friends that made it worse to get him composed and under, and I used three 3 cc. tubes. There was much struggling and rigidity until he was under, then both abscesses were incised and dressed and he came to immediately with no remembrance of anything and loud praise for the easy and pleasant anesthesia.

Mar. 3, '08. Mr. T. P., in dental chair, same as case No. 2. Under one 3 cc. tube two roots and a large molar were removed with no pain or knowledge whatever. He was nervous and did not breathe it well, going under it slowly.

Mrs. D. P., aet. 39 (wife of the above), in dental chair, under one 3 cc. tube had four bad roots removed. Though she is very nervous she is a fine patient and was a perfect success in every way. This patient has a weak heart and has been in poor health for some years.

Mrs. B., aet. 24. In the office with no assistant one 3 cc. tube was used with most perfect results. She slept easily and naturally, without any excitement. A vulvo-vaginal abscess was incised, thoroughly cleaned, and dressed. She slept about two minutes longer and awoke perfectly natural; had no nausea.

April 19, '08. Mr. M., aet. 63. In dental chair. Used one 5 cc. tube; seven teeth extracted with most beautiful results. No trouble of any kind and there was time to have done considerable more work.

April 28, '08. Mrs. H., aet. 22. One 5 cc. tube used partly to open a felon. As in the last case the result was perfect, two incisions were made to the bone, which was slightly scraped, the wound was dressed and there was time to do more. Not the least nervousness or trouble of any kind.

May 25, '08. Mrs. E. M., aet. 19. Here an attempt was made at a more continued anesthesia, but the patient was on a bed and lying on her face, and with no help it was found impossible to keep the bag filled with gas, any movement pushing apart the bag or pressing the gas from it. Patient went under in a half minute. Used three 5 cc. tubes, keeping up a very satisfactory anesthesia for 12 minutes. Then on account of the annoyance of the position, changed to chloroform without any awaking and used one dram of it for six minutes more. There was some stertor and strabismus, but no disquieting symptoms. The case was one of a sinus over the coccyx and sacrum. A rectal and vaginal examination was made, the sinus probed and laid open by a 3-inch incision down to the bone. Careful examination of it was made and it was then washed, packed, and dressed; patient wakened a little later. Slight nausea and straining.

June 12, '08. Mrs. W. M., aet. 40. In dental chair. One 5 cc. followed at intervals by three more 3 cc. tubes. Eleven teeth were extracted with much difficulty, most of the incisors breaking and coming very hard. She was slightly restless in taking it, moved and cried a little at times and seemed waking. With the last tooth she was conscious and obeyed my direction to hold still and open her mouth, but afterward said she did not know it and had no pain. She recovered without nausea and in a little while walked home.

June 18, '08. Mr. J. W. M., aet. 65. In dental chair. One 5 cc. tube partly used, seven teeth and roots removed. Patient went under in one minute, lasted two minutes longer. There was a little restlessness at first. After coming out, complained of a little headache but no nausea.

June 26, '08. Mrs. N. S., age 44, looks very pale and anemic. In dental chair complete time, 4 minutes, one 5 cc. tube, went under in one and a half minutes, removed 13 teeth, then she began to recover, gave her a few breaths of another tube and removed the balance, five very easily. She swallowed some blood and vomited a little once. She seemed awake between the two administrations, turned over in chair and answered questions, but knew nothing of it on recovering.

July 21, '08. Mrs. G. B. (same as No. 3), on table in office, used one 5 cc. tube; under in one minute, did not use full amount as only one tooth

was to be removed, but it was so decayed had to use a second tube. She came out between the two, so that she remembered it, but had no pain. Had no mouth gag, which caused some delay; whole time  $5\frac{1}{2}$  minutes, tooth not out.

Aug. 25, '08. Same patient; one 5 cc. tube used for the bicuspid root which was left; used part of second tube before she seemed to be under.

[Repeated administrations may render patient able to take more for same effect.]

Nov. 2, '08. G. C. H. (myself), one 5 cc. tube; very nervous and struggling all the time, but it was very pleasant to breathe. Had 4 teeth out and fifth one broke, did not have time to get more. My first sensation was of pain in left side below heart. No bad results. I would not hesitate to take it again.

Aug. 9, '08. H. M., age 22, tubercular abscess of thigh; one 5 cc. tube, not all used; under in one minute, incision and examination; total anesthesia 3 minutes. Perfect action and result.

Nov. 16, '08. M. S. For examination of tender kidney, one 5 cc. tube; subject extremely nervous, but when under, examination was easily made. Showed enlarged and misplaced kidney. The intense muscular rigidity changed to a flaccid condition. Condition was probably stone and pyo-nephrosis; slept long enough for good examination and about two minutes longer, then awoke easily and in good condition. Time was not taken.

Dec. 28, '08. H. D. O., farmer, age 71; one 5 cc. tube. In two minutes from time he began to inhale, five teeth were extracted and there was time for as much more work to have been done before he came out. There was no excitement or trouble of any kind, although he was a very nervous person. He has a rather large goiter and some years ago had rather bad exophthalmic signs; after treatment with galvanism he became much better.

Jan. 11, '09. Mrs. E. B., age 36, palmar cellulitis, two 5 cc. tubes, first one leaked, second only used a little of. Two incisions and dressing, a little nervous on coming out and slightly nauseated, about three months pregnant. No bad result.

Jan. 27, '09. Mrs. C. G.—Palmar abscess, one 5 cc. tube used at her home, abscess incised thoroughly and drained. The action and effect was all that could be desired. Time not taken.

[Since writing the above I have heard, though I have had no opportunity to verify it, that Dr. Roswell J. Park and Dr. M. D. Mann are using somnoform with excellent results.]

## ACUTE TOXEMIA AFTER CHLOROFORM ANESTHESIA\*

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F. W. HEYSETT, M. D.,  
Freesoil.

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The subject of this paper, the late poisonous effects of chloroform, is one which should be of the greatest interest to every practitioner of medicine and surgery, and yet it is a subject which gets hardly a passing notice in our medical literature today.

The dangers of chloroform during the induction and maintenance of anesthesia have long been known. The contraindications to the use of chloroform have been thoroughly studied and discussed. The possibility of nephritis or pneumonia following its use is a matter of common knowledge.

Laboratory experiments, from Nothnagel's in 1866, to Benno Müller's in 1905, have proved that chloroform, and to a lesser degree other anesthetics, produce fatty degeneration and necrosis of cell tissue, most marked in the liver, but found in the kidneys, heart, and other organs.

Deaths due to the late poisonous effects of anesthetics have been reported and published. Yet in spite of all this knowledge how many were there in our profession five years ago, who did not consider his patient out of danger from the anesthetic when he had recovered from its primary effects?

The subject of chloroform poisoning has been studied from many points of view, yet it remained for Bevan and Faville in 1905 to collect the mass of published data, and comparing and weighing facts from the various reports, show that there was a definite toxic condition associated with fairly constant symptoms,

sometimes ending in death, due to the late poisonous effects of chloroform and other anesthetics.

The symptoms of this toxemia appear from ten to one hundred and fifty hours after anesthesia. During this interval the patient may feel quite well. The change comes quickly. The patient feels distressed and anxious, makes queer speeches, grows very restless, wakes up from sleep frightened.

Vomiting begins and continues nearly to the end. Restlessness increases, and the patient shrieks as in fear. A condition of sleepiness, broken by maniacal delirium and convulsions, follows. The skin becomes jaundiced and the breath takes on the sweetish odor of acetone. Somnolence deepens into coma, and the convulsions lessen in frequency and severity. The muscles are constantly in a spastic condition. Noises, pressure, or attempted movements of a limb start a slow spasm of the muscles. The urine is scanty, contains acetone and allied bodies, and is loaded with the products of liver degeneration and kidney inflammation. There is cyanosis with labored breathing of the Cheyne-Stokes type. At the height of the poisoning the walls of the capillaries may give way and we have hemorrhages from the mucous membranes and into the skin. The temperature increases, the heart beats more rapidly, the breathing becomes shallower, and the coma deepens to death. This is the picture of a fatal case.

You all have seen cases of a milder type after prolonged anesthesia, cases with persistent vomiting, great restless-

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\*Read before the Michigan State Medical Society at Manistee, June 23-24, 1908.



ness, of mild delirium, followed by drowsiness, together with slight jaundice, and irregular fever, for which no adequate cause could be found.

These cases have been blamed to nearly every thing but the true cause, the anesthetic.

There are certain conditions that render the patient more liable to this form of poisoning. Twice as many females die as males. Two-thirds of the recorded deaths have been in children under ten. Recent anesthetics add to the danger. Starvation, hemorrhage, anemia, carcinoma, diabetes, gangrene, sepsis, liver diseases, in short any condition of exhaustion or intoxication which lessens cell resistance, any state of disease or disability of the liver may predispose to this toxemia.

The primary cause of this trouble is the chloroform circulating in the blood. This chloroform causes a parenchymatous inflammation evidenced by fatty degeneration and necrosis of the liver cells principally, and in lesser degree of the cell structure of other organs. The liver is the organ most affected and is found post mortem in all stages of fatty disorganization. The poisons causing the symptom-complex described here are in all probability toxins derived from the disintegrating liver cells, together with substances which these same cells should eliminate or destroy.

The following is the report of a case seen in consultation with Dr. Kirkbride in September, 1906:

Miss V. W., aged 19, a robust, healthy girl, was taken sick Sept. 2nd. She complained first of pain in the left abdomen. Later the pain shifted to the right abdomen and localized over the appendix. On Sept. 8th increased resistance over the appendix was noted. From the beginning of the illness until Sept. 10th the heart beat steadily from 108 to 110 and the temperature ranged from normal to 100° F. On Sept. 9th an abscess was plainly palpable, and the patient seemed in good condition. We advised operation and opened the

abdomen, Sept. 10. The anesthetic used was chloroform and the patient was under its influence about one-half hour. Dr. D. informs me that the patient went easily under the effect of the anesthetic and that it required little chloroform to maintain anesthesia. She recovered from the immediate effects of the chloroform rapidly. A short time after awakening she said she felt well and had no pain.

At midnight, about thirteen hours after operation, she went into a condition of apparent collapse. Vomiting commenced and the skin grew cold. The axillary temperature dropped to 95° F. The patient was restless, seemed distressed, and complained of the heat. Hot packs were applied and in one-half hour she was warm and sweating, with a temperature of 101° F. and a pulse still 108. During the remainder of the night the temperature zig-zagged between 101° and 104°. Sept. 11th at 9:30 a. m. the temperature was 103, pulse 110. Patient was worried about her condition and restless. At 1:30 p. m. she was still more restless. At 3 p. m. restlessness had increased and she attempted to tear away the bandages. At 4 p. m., sixteen hours after the onset of symptoms, she seemed greatly frightened and screamed shrilly at the top of her voice for a few minutes, then subsided into a comatose state, from which she never fully roused.

Saw the case at 4:30 p. m. Her temperature was 105°, pulse 156, respiration 50. Cold sponging quickly reduced the temperature to 103° and pulse 136. The temperature continued to drop until it reached 99.2° and the feet and hands became cold. Hot applications soon warmed the extremities and the temperature began again to rise. This seemingly causeless rise and fall kept up until the immediate rise before death.

The respiration was of the Cheyne-Stokes type labored at first, but shallower and quieter toward the last. The pulse was small, weak and irregular. The coma was not deep at this time and the patient could still swallow. She had at times spasms affecting the wrist and ankle joints and at others general convulsions. There was at all times a spastic condition of all the muscles. Movements of any part of the body were resisted. Any sharp sound, any skin or muscle irritation would start a slow spasm. General reflexes were increased but slow. The pupils were widely dilated and little sensitive to light. There had been vomiting at intervals since the first collapse. The vomitus now became black in color. The bowels had moved three or four times a day since Sept.

7th. The passages were now partly yellow, partly black. Later there was a discharge of bloody mucus from the vagina, also capillary hemorrhages into the skin. There was some general edema. The skin of the neck and face was especially puffy, and there was a generalized deep jaundice. The tongue remained clean during the entire illness. There was after the incision neither pain, general abdominal tenderness, nor distension. The urine was acid and of high specific gravity; some albumen was present; it reduced Fehling's reagent, but the fermentation test showed an absence of sugar. Acetone was present (iodoform test), and a trace of diacetic acid (Gerhardt test). Bile pigments (nitric acid and iodine tests) and blood (guaiac test) were found.

Microscopical examination of the urine showed granular, epithelial, and blood casts, and many blood cells. The vomit contained blood cells and clots, some of the clots seemingly bile stained.

All measures of treatment at hand which seemed to offer any hope of relief were tried. Heart stimulants were given hypodermically. Physiological salt and sodium bicarbonate solutions were introduced freely, both into the colon and under the breasts. In spite of all, the coma deepened, the convulsions subsided, the breathing grew shallower, the heart weaker, and the patient died about nineteen hours after the onset of coma.

The patient just described was one of those, happily for us, rare cases who are unable to withstand the toxic influence of even a moderate dose of chloroform.

I firmly believe that had a local anesthetic been used, or had ether been employed, that the patient would have made an uneventful recovery.

### Conclusions.

Our study of the various anesthetics has brought us to the following conclusions:

Local anesthesia should replace the

general anesthetic wherever possible.

For minor operations nitrous oxide is the safest general anesthetic. Nitrous oxide given with oxygen may be the anesthetic of the future.

Ether, chloroform, and bromide and chloride of ethyl all produce poisoning, as evidenced by inflammation and fatty change in the internal organs. The amount of fatty degeneration is in direct ratio to the power of the anesthetic used. Ether, our least powerful anesthetic, is therefore the safest, and unless absolutely contraindicated, should be the anesthetic of choice.

The severity of the poisoning is in direct proportion to the length of time of anesthesia and to the amount of anesthetics used.

Therefore every effort should be put forth to shorten the time of operation and to lessen the amount of anesthetic given.

Chloroform should be especially avoided in conditions of debility and in liver insufficiency from any cause.

In closing, I will call your attention to the advance report of the Anesthesia Commission of the American Medical Association, read at Chicago. The main points as I remember them, were as follows:

Nitrous oxide is the safest general anesthetic.

Nitrous oxide and oxygen is a promising combination.

For the general practitioner ether by the drop method is the safest general anesthetic.

Chloroform is a dangerous drug; and its use by the general practitioner should be discouraged.

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How much success attends the appearance of the doctor as relates to personal habits, condition of clothing and cleanliness is estimated from the discussion these things receive in social circles. In these days of septic infection and chemical

cleanliness, thinking people observe critically the need of nail brushes and laundry. Dirty or shabby clothing, soiled linen and other evidences of personal neglect compete with ignorance to defeat success in practice.

## RABIES IN MAN AND ANIMALS\*

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GEORGE W. MORE, M.D.,  
Ionia.

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During the past few weeks a number of dogs, thought to be infected with rabies, have been found running the streets of the city, and a number of people have been bitten. The brains of three or four of these dogs were sent to the laboratory at Ann Arbor for examination and a diagnosis of rabies has been returned. There are at present four people from this city taking the Pasteur treatment at the state institute. Owing to these facts, I concluded that a paper on this subject would be appropriate for this occasion, and will endeavor to give you a brief review of what is known concerning rabies and its prophylactic treatment.

Rabies or hydrophobia is an infectious disease which occurs epidemically, chiefly among the carnivora, especially the dog and wolf. The infection is carried by the bite of a rabid animal or by a wound or abrasion being licked by such. The disease is often transferred to other species, and when once started can be spread from individual to individual by the same paths of infection. Thus it can occur epidemically from time to time in cattle, sheep, horses, deer, cats, rats, mice, and be communicated to man; but, in modern times at least, infection practically never takes place from man to man, though such an occurrence is quite possible. In the western states the disease is said to be common in skunks, and cases have recently been reported in squirrels; poultry are also said to carry the disease.

In Western Europe rabies is most fre-

quently observed in the dog; but in Eastern Europe, especially in Russia, epidemics among wolves constitute a serious danger. In Northern Germany the disease is practically unknown, as all dogs are kept muzzled.

While a source of infection undoubtedly occurs in all cases of hydrophobia, and can usually be traced, all attempts to determine the actual organism have been unsatisfactory. Memmo has isolated an organism resembling a yeast, which he states has produced both types of the disease in rabbits and dogs. Bruschetti, by using media containing brain substance, has grown a bacillus resembling the diphtheria group, and with which he claims to have produced paralytic rabies in rabbits. Others claim to have isolated various cocci, but in the work of none of these observers is there evidence of the crucial test having been applied, namely that of immunizing animals against the ordinary hydrophobia by means of pure cultures of the alleged causal organisms.

There is no doubt that rabies is, in every respect, analogous to the other bacterial diseases; the most striking proof being the protective inoculation methods which constitute the great work of Pasteur. Everything points to a micro-organism as being the cause. Judging from other diseases, there is a strong suspicion that a living organism is actually present in the central nervous system, saliva, etc., which yield what is called the hydrophobic virus; for otherwise, the disease could not be transmitted through a series of animals, as

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\* Read before the Ionia County Medical Society.



can be done, if it were a mere toxin. The resistance to external agencies varies. Thus in the nervous system the virus is virulent until destroyed by putrefaction; it can resist the prolonged application of temperature of from  $-10^{\circ}$  to  $-20^{\circ}$  Centigrade, but, on the other hand, it is rendered inert by one hour's exposure at  $+50^{\circ}$  Centigrade. Its virulence also probably varies according to its source. Thus, the death rate among persons bitten by mad dogs is given as about 16%, while after bites by wolves, it is 80%, probably due to the fact that the wolf being a more ferocious animal, the number of bites and hence the amount of virus is correspondingly increased. But as we shall see, alterations in the potency of the virus can be effected by artificial means.

As to the pathology after the disease has developed, the most important lesions consist of accumulation of leucocytes, around the blood vessels and nerve cells, particularly the motor ganglion cells of the central nervous system. Especial importance in the rapid diagnosis of rabies is attached to the accumulation of lymphoid and endothelial cells around the nerve cells of the sympathetic and cerebro-spinal ganglia. Various degenerations of nerve cells also occur. The lesions are most perceptible upon the death of the animal, although they can be made out if the animal be killed after the symptoms of the disease are strongly developed. These pathological changes have also been observed in Landry's Paralysis, but given a case of "street rabies," the diagnosis can be made with certainty much earlier than by the inoculation method. The changes in other parts of the body are not so important.

Experimental pathology confirms the view that the nervous system is the center of the disease. The most certain method of infection is by inoculation of the virus beneath the dura-mater. Pas-

teur has thus found that in case of any animal or man dead with the disease, injection by this method of any part of their central nervous system, of the cerebro-spinal fluid, or saliva, invariably gives rise to rabies, and the natural period of incubation is shortened. The furious or paralytic form can be produced according to which was present in the original case. Inoculation into the anterior chamber of the eye is almost as certain to produce the disease. These inoculation experiments show that the virus is present in the spinal cord, brain, cerebro-spinal fluid, peripheral nerves, and saliva, and there is evidence to show that it is present in the pancreas and mammary glands; but it is not thought to be present in the liver, spleen, kidneys or blood.

The virus gaining entrance by the infected wound early manifests its affinity for the nervous tissues. It reaches the central nervous system chiefly by spreading up the peripheral nerves. This can be shown by inoculating an animal in one of its limbs. If now the animal be killed before symptoms have manifested themselves, rabies can be produced by subdural inoculation from the nerves of the limb infected. The disease can also be produced by injection of that part of the spinal cord into which these nerves pass. This explains how the initial symptoms of the disease (pain along nerves, paralysis, etc.), so often appear in the infected part of the body, and it probably also explains why bites in such richly nervous parts, as the face and head, are much more likely to be followed by hydrophobia than bites in other parts of the body. Intravenous injection of the virus differs from other modes of infection in that it more frequently gives rise to paralytic rabies, and Pasteur explains this by supposing that the whole of the nervous system is simultaneously affected. The virus also has a special affinity for the salivary glands, and it is from inoculation by this

infected secretion that the disease is most commonly produced. It has been found that the saliva of an infected dog becomes virulent three days before the first appearance of the symptoms.

Variable time elapses between the introduction of the virus and the appearance of the symptoms. Horsley states that this depends on the following factors: (1) Age. The incubation period is shorter in children than in adults. For obvious reasons the former are more frequently bitten. (2) Part infected. The rapidity of the onset of the symptoms is greatly determined by the part of the body which happens to have been bitten. Wounds about the head and face are especially dangerous; next in order in degrees of mortality come bites on the hands, then injuries in other parts of the body. This relative order is, no doubt, greatly dependent upon the fact that the face, head, and hands, are usually naked, while the other parts are clothed; it would also appear to depend somewhat upon the richness in nerves of the parts. (3) The extent and severity of the wound. Puncture wounds are the most dangerous; the lacerations are fatal in proportion to the extent of the surface afforded for absorption of the virus. (4) The animal conveying the infection. In order of decreasing severity come: the wolf, cat, dog, then other animals.

Symptoms of excitement or of depression may predominate in a given case, and it is customary to describe clinically two varieties of rabies. (1) Rabies proper or furious rabies. (2) Dumb madness or paralytic rabies. The disease is essentially the same in both cases. In the dog the furious form is the most common. After a period of incubation of from three to six weeks, the first symptoms noticed is a change in the animal's manner; an affectionate dog may suddenly become distant, and a sullen cross dog unduly affectionate. The animal may

become restless, it snaps at anything which it touches, and tears up and swallows unwonted objects; it has a peculiar high-toned bark, and spasms of the throat muscles come on, especially in swallowing, and there is abundant secretion of saliva. In the dog the supposed fear of water is, however, a myth; it fears to swallow at all. Gradually convulsions come on, then paralysis, coma, and finally death supervenes. In the paralytic form the early manifestations are the same, but paralysis appears sooner. The lower jaw of the animal drops from involvement of the elevator muscles; all the muscles of the body become more or less weakened, and death ensues without any marked irritative symptoms.

In man the incubation period varies greatly, and is given as an average from six weeks to two months; cases have occurred in two weeks, others have been prolonged to seven or eight months or from one to two years, although this latter fact has not been definitely settled. The symptoms in man are divided into three stages. (1) The premonitory stage in which there are certain prodromata. There may be irritation, pain, or numbness about the bite, and pain along the nerves of the limb. The patient is depressed, and melancholy; complains of headache, loss of appetite; is irritable, sleepless, and has a constant sense of impending danger. There is greatly increased sensibility, and a bright light or loud voice is distressing. The larynx may be injected, and the first symptoms of difficulty in swallowing are experienced. The voice is husky, and there is a slight rise of temperature and increase of pulse. (2) Stage of nervous irritability in which all the reflexes are exaggerated, and there is an extreme degree of hyperesthesia. Any apparent stimulant, i. e., a sound, draught of air, or mere association of a verbal suggestion, will cause a violent reflex spasm. This constitutes the most distressing feature of the disease. The spasms

affect mainly the muscles of the larynx and mouth and are extremely painful; and are accompanied by an intense sense of dyspnea, even after the glottis has been opened and tracheotomy performed. Attempts to take water cause intensely painful spasms of the larynx and muscles elevating the hyoid bone. This is what makes the patient dread the very sight of water and gives the name hydrophobia to the disease. The spasms may be associated with maniacal symptoms; during the intervals the patient is quiet and the mind clear. The temperature is usually elevated to  $100^{\circ}$  to  $103^{\circ}$ . In some cases the disease is afebrile. The patient rarely attempts to injure his attendants and may be particularly anxious to avoid hurting any one. Furious mania may come on during the spasms, and owing to the contractions of the throat muscles, the patient may give utterance to odd sounds which imaginative people have likened to the barking of a dog or the snarl of the wolf, etc. This stage lasts from a day and a half to three days, and gradually passes into the third or Paralytic Stage which constitutes the so-called dumb rabies. This stage rarely lasts longer than from six to eighteen hours. The patient becomes quiet; spasms cease; unconsciousness gradually supervenes; the heart's action becomes more and more enfeebled; and death occurs by syncope.

M. Thiriar (*Presse Médicale*, Feb. 8, 1908), reports the following case occurring in a man five weeks after the bite, in spite of intense anti-rabic treatment. The symptoms developed in less than three days, and the patient succumbed without presenting any agitation until an hour before death. He was never aggressive, and never desired to bite those around him. His mental faculties were excellent, and he even joked in ignorance of his terrible situation. The most striking feature was the invincible horror of water which he showed; when it was

presented to him he became greatly agitated and hid his head under the pillow. The autopsy showed nothing in particular; but inoculation of the medulla oblongata into animals gave positive results; all the animals developed rabies.

Osler describes a pseudo-hydrophobia or (Lyssophobia) which may closely resemble the true disease; but is nothing more than a neurotic or hysterical manifestation. A nervous person bitten by a dog either rabid or supposed to be rabid, develops within a few months, or even later, symptoms somewhat resembling hydrophobia. He is irritable and depressed, and constantly declares his condition to be serious, and that he will become mad. He may have paroxysms in which he says he is unable to drink and grasps at his throat and becomes emotional. The temperature is not elevated and the disease does not progress. It lasts much longer than the true disease, and is amenable to treatment, especially with powerful electric currents. It is not improbable that the majority of cases of alleged recovery from hydrophobia have been from this hysterical form.

The disease, when once established is incurable, and so I will confine myself to a description of the prophylactic treatment.

When a person is bitten by a rabid animal the wound should be immediately cauterized by some penetrating caustic as nitric acid, hydro-chloric acid, chromic acid, or the actual cautery. Silver nitrate and carbolic acid are inefficient as they do not penetrate deeply. It has been shown that cauterization within five minutes after the bite prevents the disease from developing. If done within an hour, it saves a certain proportion of the cases. After this time it only lengthens the incubation period; but, as we shall presently see, this is an extremely important effect. After cauterization the patient should be sent to the nearest Pasteur Institute for prophylactic



treatment.

Under no circumstances should a supposedly rabid animal be killed as more can be learned by watching the symptoms develop than by post-mortem examination. In the latter case, the occurrence of broken teeth, marked congestion of the fauces, and the presence of unusual material in the stomach, are suspicious. Examination of the spinal ganglia may give a provisional diagnosis which can be confirmed by the inoculation method. If the animal be not killed, the characteristic symptoms can be watched; but if it has been killed, the head can be packed in ice or the organs removed and placed in bottles of sterile water or glycerine and sent to the laboratory for examination. The inoculation method being slow, the diagnosis may be delayed and valuable time lost.

The work of Pasteur has revolutionized the whole treatment of wounds made by rabid animals. Pasteur started with the idea that, since the period of incubation in the case of animals inoculated with the nervous systems of mad dogs is constant in the dog, the virus has always been of constant strength. He found on inoculating a monkey subdurally with such a virus, then inoculating a second from the first, and so on with a series, that the virus gradually lost its virulence, as shown by the longer periods of incubation on subdural inoculations of dogs, until it finally lost its power of producing rabies in dogs when injected subcutaneously. On attaining this point, the virulence was not further diminished by passage through the monkey.

On the other hand, if the natural virus was similarly passed through a series of rabbits or guinea-pigs, its virulence was increased till a constant strength was attained. Hence Pasteur had at his command three varieties of the virus: one of natural strength, one attenuated, and one exalted. He also found that

commencing with a subcutaneous injection of a weak virus and following with injections of stronger varieties, he could in a short time immunize dogs against a subdural injection of a virus which under ordinary conditions would cause death. Next he discovered that the exalted virus in the spinal cords of rabbits, as above referred to, could be attenuated so as to no longer produce rabies in dogs by subcutaneous injection. This was done by drying the spinal cords of the rabbits over caustic potash, and the virulence was found to be proportional to the length of time the cords were kept. So a series of cords thus treated each day gave a series of vaccines of the different strengths. He then applied himself to ascertain whether the longer period of incubation in man could not be utilized to "vaccinate" him against the disease before its gravest manifestations took place. The technique was to rub up a small piece of the cord in a little sterile bouillon and inject it hypodermically. The first injection was made with a very attenuated virus, that is, a cord fourteen days old. In subsequent injections the strength of the virus was gradually increased. The principle is, of course, the same as developing an artificial active immunity against a bacterial disease.

The method now known as the Pasteur treatment is practically the same. In serious cases the treatment varies and is condensed. Thus on the first day at 1 a. m., 4 p. m., and 9 p. m., cords of 12, 10, and 8 days' drying are used. On the second, cords of 6, 4, and 2 days. On the third a cord of one day. On the fourth day, cords of 8, 6 and 4 days, and on the fifth, cords of 3 and 2 days; and on the sixth cords of 1 day, and so on for ten days. In each case the average dose is about two cubic centimeters of the emulsion.

The success of this treatment has been marked and statistics show that from a death rate formerly sixteen per cent in

all persons bitten, this treatment has reduced it to five-tenths of one per cent.

Pasteur held the view that the spinal cord contained both the microbes and the specific poison; and if the latter spread through the body more rapidly than the microbes themselves, it confers an immunity against the subsequent spread of the microbes and affords protection to the nervous system in particular. In order to confer immunity, it is necessary to introduce as large an amount of the chemical poison as possible.

In the early part of the nineteenth century, Valli, an Italian, showed that immunity against rabies could be conferred by administering through the stomach progressively increasing doses of the virus. Following this up, others have submitted the virus to peptic digestion, and have immunized animals by injecting gradually increasing strengths. The serum from animals thus immunized has been shown to produce passive immunity in other animals; and, when injected into an animal 7 to 14 days after infection, it prevented fatal effects even after symptoms had begun to develop. Whether the serum contains antimicrobial or antitoxic bodies is unknown. This is known as the Italian method of immunization, and is recommended in addition to the Pasteur Treatment.

In this paper I have attempted to give

you some of the facts concerning rabies as they are generally known. No doubt many interesting points have been left out owing to a lack of late literature on the subject. As a summary, I wish to emphasize some of the more important points.

(a) Rabies is an infectious disease conveyed by the bite of a rabid animal.

(b) The specific organism has not yet been definitely discovered.

(c) The virus shows especial affinity for the nervous tissues, and can also be found in the saliva, milk, and cerebrospinal fluid.

(d) The saliva of dogs is virulent three days before the symptoms begin to develop.

(e) After a person is bitten, the wound should be immediately cauterized, and the animal isolated and watched for the characteristic symptoms.

(f) If the supposedly rabid animal is killed, send the brain to the nearest Pasteur laboratory for examination.

(g) When once developed the disease is usually fatal.

(h) Do not delay, send your patient to the institute for prophylactic treatment at once.

Institutes for this treatment are now within reach of nearly every one, and a grave responsibility rests on those concerned, if a person bitten by a suspected rabid animal is not subjected to the Pasteur treatment.

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The medical standards mean the public welfare; they secure protection of the people against misrepresentation of medical facts.

The doctor should not neglect the fact that while he is examining his patient, the patient is examining the doctor and is likely to reach a diagnosis in advance of him.

The old-time doctor who could swear at his patients and get drunk at pleasure, with impunity, has gone the way of pioneer life. The people of today demand gentlemanly conduct added to medical ability.

Many a doctor's fee is lost because a statement of account is not ready to meet the patient's willingness to pay at the time when his ability and gratitude prompt him to do so.

The value of medical training depends not so much upon a recollection of the language of teacher or text-book, as upon mental pictures of the facts. Mental concepts and not word formation hold in memory the ideas and facts easily reduced to practice. Hence the superiority of clinical and laboratory instruction over the didactic.

# The Journal of the Michigan State Medical Society

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APRIL

## Editorial

The efficiency of out-door clinics in large cities is measured not only by good diagnosis and rational therapeusis, but by humane interest and coöperation on the part of the attending physicians. The modern tendency to diminish the prescribing of drugs and to increase the advising of proper hygiene, diet, rest, change, psychic control, hydro-therapeutics, massage, and systematic exercise, has brought the average hospital day-patients to the pass where they confront a hopeless prospect. Of what use is it to advise the tuberculosis patient to sleep outdoors, when he has neither knowledge, means, or initiative to provide the apparatus? Of what use to advise a month of rest or change for people who need every day's earnings for sustenance? The absurdity of the advice so glibly given is a reproach to hospital régime and to the medical conscience. It is nearly a truth that the charity patient is most fortunate who has a complaint grave enough to admit him to the wards, while he who has lesser ills must trust to being bettered by placebos, or wait till he is more seriously diseased.



The great gap between the hospital clinic and financial charities has been bridged with remarkable success at the

Massachusetts General Hospital in Boston, through the medium of a *Social Service Department*, now in its fourth year of operation. No finer application of charitable work can be imagined than this organization; it gives the physician a new interest and impetus in his routine work, for he can see results from that very advice which formerly was nonsense; it brings new hope to the great army of pathologic destitutes who previously were condemned to continued misery, and a lessened or lost wage; and lastly it assures to charitable societies and individuals that none but deserving people will be the recipients of their bounty.

Dr. Richard C. Cabot, who was a pioneer in this movement, says: "From the start our wish has been to make the treatment of out-patients more effective by following the patient's needs back to the home, to his work conditions, his ignorance, his poverty, in the hope of finding clews which the doctor has no time to follow up. To get behind symptoms to the root of the trouble is always the physician's ideal."

With what success this has been done is shown in the *Third Annual Report* of their work. The organization comprises a staff of women workers, two of whom act as general supervisors, and the remainder are divided into committees—one on Psychiatric Work, one on Sex Problems, one on Tuberculosis, etc., each committee having a staff of volunteer assistants, recruited from society women, nurses and charity workers. The system in its relation to the clinics is operated as follows: "Each clinic is provided with a pad of social service reference slips, on which the physician writes his reason for sending the patient." The social service workers are quartered in a special room in the out-patient building, and are on duty during the hours of the clinic.

The following samples of reference



slips will best serve to explain the variety of reasons prompting the physician to seek their aid:

"Generally debilitated. Marked secondary anemia. Needs forced feeding and general hygiene."

"Pyopneumothorax. Is nursing baby. Ought to be in the hospital. What can you do for the baby?"

"Unmarried; pregnant."

"This case needs to be carefully studied; domestic trouble is the probable cause of her disease. I suggest a rest for a time."

"Patient says she must return to work on account of her finances. She really is not in condition to do so yet. Can you do anything?"

"To teach mother method of modifying milk."

"This patient has taken lots of medicine, but doesn't know how to live. Needs exercise and hygiene."

"This patient has rigid flat foot. Needs daily zänder. Can't pay."

"Suffering from moderately advanced phthisis, but is a favorable case for arrest of disease."

These reasons represent only a few of the problems presented to the Social Service Workers. Their activities are far-reaching, and the enthusiasm of the loyal corps of women is explained by the benefits which they see conferred. Their first duty is to comprehend the doctor's diagnosis,—debility, bad hygiene, infectious disease, infantile paralysis, or whatever it may be; their next duty is to make the "*social diagnosis*,"—ignorance, poverty, unhappiness, crime, shiftlessness, etc. They proceed to discover the patient's resources, both personal, family, and community. They have, of course, an exhaustive catalog of societies, institutions, and individuals that are available for help, not only in Boston, but in every city and town for miles around. In one year's time they secured coöperation from 170 different agencies, including state and city institutions, private hospitals and sanatoria, convalescent homes, visiting nursing associations, associated charities and relief societies, settlements, churches, temporary and

permanent homes, fraternal organizations, relatives, friends, and private individuals.



**The work for tuberculosis** has been a large factor in improved statistics. Nearly one-half of the total cases referred to the Social Service Department were tuberculous, of which 67% were pulmonary. These patients are first taken aside and a thorough explanation given of the disease and the means of arrest. Minute instruction is given as to hygiene and diet. The patient is then referred to the proper agency, depending on the stage of the disease and the patient's home.

If practicable, the home treatment is advised, instituted, and overseen. If no other disposition of the case is possible, it is referred to the *Suburban Tuberculosis Class*, which is affiliated with the hospital, conducted by three young physicians, and a corps of women assistants, who instruct both in class and at the patient's home. Thus no case of tuberculosis is sent away with mere idle advice to "get plenty of fresh air, eggs, milk, and rest," and a prescription for cod liver oil. Some definite help is rendered to every victim, so that he gets started on the right track, with assurance of treatment properly continued.



**The Sex Problem** has become an important item in their work, especially as it affects girls. The pregnant unmarried woman, the gonorrheic, the syphilitic, the immoral, are frequently referred, with the idea of giving them a new view of life, and putting them in touch with the proper moral guidance. Some valuable lessons are being learned in this direction, and it seems as if the hospital clinic were an ideal field for the first steps in moral reclamation.

Another feature of this department is the establishment of a lunch-counter in the Out-Patient Clinic, where patients, doctors, nurses, and employes can obtain for five cents a lunch of milk, crackers and cheese. The workers have also taken interest in looking up old patients with varicose ulcers, etc., and gathering statistics that make a valuable report, besides rendering service to the patients.

In the work for psycho-neurotics a great advance has been made. Explanation, suggestion, and re-education of the will have been constantly practised; the "social consciousness" is awakened, and concrete factors toward this are employed, such as a clay-modeling class, and summer vacation parties.

All this work is still in the process of development, and as a therapeutic means is still in its infancy. But the scope and method is so evident, so practical, and withal so easy, that Dr. Cabot's report ought to reach many physicians in many cities, and inspire them to inaugurate similar movements.



**How Medical Defense Works in Maryland.**—The plan of medical defense which was adopted by the Maryland Medical and Chiurgical Faculty (the State Society of Maryland) differs from the plan proposed for Michigan in that all threatened cases must be first passed upon by the council, which shall determine whether or not the member shall be allowed the use of the machinery of the state society for his defense. According to our plan *every* case will be defended. In explanation of this and of the criticism which has been made, namely, that there might be cases where our members would not be justly deserving of defense, it is to be said that our proposed defense league does not defend a member, except in the sense that it furnishes attorneys who are especially experienced in medico-legal matters and

pays their bill. Every man sued must furnish his own defense. If he has been criminally negligent and can furnish no adequate defense, he must take the consequences. Nineteen out of every twenty suits or threatened suits, however, are unjust; are simply cases of blackmail. It is to provide against this possibility that the proposed league is to furnish insurance. It does not furnish the defense, and it is not intended that it should. This distinction should be kept carefully in mind.

In Maryland the plan has been in force for some years. The *Bulletin* has this to say of the work:

It is now about five years since the State Faculty adopted the plan of insuring its members, relieving them of the necessity for carrying the burden of expensive insurance in private, money-making corporations. The plan adopted was modeled after that in use in New York for several years previously and it has worked admirably. A number of suits have been instituted; a few have actually gone to trial; in every instance, the defendant has been successfully defended; and this insurance has been given the members without extra cost above membership dues. There have at times been rumors, emanating from interested parties, that New York was discontented with this feature of the State Society work or was finding it too much of a burden to continue. The falseness of such rumors is well shown in the report of their counsel, presented at the recent annual meeting of the State Society: "The only verdict ever recorded against a member of the Society since the existence of organized malpractice defense, was reversed and set aside by the unanimous decision of the Court of Appeals. Up to the present time, actions for alleged malpractice suits have been defended in 39 counties of the state. There is evidence of increase in the abandonment of cases brought as soon as the State Society appears by attorney for the defendant. This is perhaps the best proof of the effect which organized defense is creating in the minds of the public." Apparently they gave no thought to giving up the plan.

## Book Notices

**Appendicitis and Other Diseases of the Vermiform Appendix.** By Howard A. Kelly, M. D. Octavo, 502 pages, with 215 original illustrations, some in colors and 3 lithographic plates. Cloth, net \$6.00. Philadelphia, J. B. Lippincott Co., 1908.

This splendid volume is an abridged second edition of the author's well known "Vermiform Appendix and Its Diseases" which appeared in 1905. The latter volume is an immense storehouse of information about the appendix and this new edition retains all the practical part of the former edition, carefully edited and brought up to date. The new book contains some 300 fewer pages and 185 fewer illustrations than the older work; it is less expensive and will appeal more directly to the general practitioner.

Every phase of the subject has received attention in a style so lucid, that there is never any doubt as to the meaning. The illustrations are by Broedel, Huntington and Horn, and are among the best in all medical literature. They will repay very careful study, for the details are well nigh perfect and the legends very full and complete.

In all there are 25 chapters, following one another in logical sequence. There are four chapters on pathology—the most complete text on the subject in the language. Chapter XII, on "Leucocytes in Appendicitis" is new, being an elaboration of a much shorter section in the earlier work.

Every practitioner should read Chapter XVI, on "Treatment Previous to Operation." Indeed the book is intended as much for the medical man who never does an operation as for the surgeon, for the author recognizes that under certain conditions the patient stands a better chance without, than with operation. Early operation, however, is emphasized throughout.

On page 235 are 19 "aphorisms in appendicitis for the general practitioner." Some of these are:

"In all severe cases of abdominal pain, withhold morphine until the diagnosis is clear and appendicitis excluded or included."

"Then give morphine (in small doses), as the best treatment is to 'splint' the bowels."

"Never give purgatives in appendicitis." (Would that this might be emblazoned on every medical diploma.)

"The treatment is just the opposite of that of

colic, hence the great care necessary in differentiating."

"Appendicitis, as a rule, starts unexpectedly."

"Note well that a pain exclusively in the left side does not exclude appendicitis."

"Of all local symptoms, muscle spasm is the most important."

"It is better to operate occasionally in error in a doubtful case than to wait for more positive signs and to lose a life now and then. No patient is ever killed by a skillful early operation. Many die for want of one."

"However, this facility with which an operation can be done must not be used for an excuse for slipshod diagnosis and unnecessary operations."

All of these points are carefully elucidated in the text, and full directions given for the management of any stage and practically every complication of the disease.

This is the type of book which should be found in the physician's library. Twenty such, each a monograph on a separate subject, are worth many times over, dozens of the text-book type.

A careful reading has disclosed but one typographical error—and this is in the paging of a reference. The paper and binding are excellent.

It is seldom that one sees a second edition of a work smaller than the first, but we believe that the author has done wisely in making this new book (for it is practically new) smaller and more within the price which the general profession is willing to pay. Nothing of practical value has been eliminated from the former work. Indeed the material is in better form for every-day needs, and it is to be unreservedly recommended.

**The National Standard Dispensary.**—Containing the National History, Chemistry, Pharmacy, Actions and Uses of Medicines, including those recognized in the Pharmacopœias of the United States, Great Britain and Germany, with many references to other Foreign Pharmacopœias. In accordance with the Eighth Decennial Revision of the U. S. Pharmacopœia, by authorization of the Convention. By Hobart Amory Hare, B.Sc., M.D., Professor of Therapeutics and Materia Medica in Jefferson Medical College, Philadelphia; Charles Caspari, Jr., Ph.G., Ph.D., Professor of Theoretical and Applied Pharmacy in the Maryland College of Pharmacy, Baltimore; and Henry H. Rusby, M.D., Professor of Botany and Materia Medica in the College of Pharmacy of the City of New York; Expert in Drug Products, Bureau of Chemistry, Department of Agriculture, Washington, D. C.; Members of the Committee of Revision of the U. S. P.; with valuable assistance from Edward Kremers, Ph.D., Daniel Base, Ph.D., and Joseph F. Geisler, Ph.C. New (2d) edition, thoroughly revised. Octavo, 2050 pages, with 478 engravings. Cloth, \$6.00 net. Lea & Febiger, Publishers, Philadelphia and New York, 1908.



The National Dispensatory, commonly known as the U. S. D., was originally created to supply the intentional omissions of the pharmacopœia, which is limited to the mere description of the drugs which are official and to lists of ingredients in compounds. The dispensatory may be said to fulfill three absolutely necessary uses (1) working information regarding the drugs of the pharmacopœia, (2) information concerning the pharmacology of these drugs, or their physiological effects and (3) the therapeutics or uses of the drugs. Hence the book is as useful to him who prescribes as to him who fills the prescriptions. It also contains the same information regarding the non-official remedies, many of which are of the highest importance. The U. S. P. is revised every ten years, while the committee working on the U. S. D. is constantly at work, and this new edition of the dispensatory is therefore three years ahead of the last pharmacopœia.

This edition contains 200 more drugs than the first. It also contains an abstract of the national formulary and the text and decisions of the pure food and drug law.

The indexing is a feature to be highly commended. The general index consists of 120 three-columned pages with the names of drugs in English, French, German, Italian, Spanish and Latin. The therapeutic index is no less complete.

Of the high authority of any work emanating from such masters as Hare, Caspari, Rusby, Geisler, Kremers and Base, it is unnecessary to speak. In short, this great encyclopedia of the latest pharmacology, pharmacy and therapeutics is recognized as the leading reference for every one concerned with drugs, their manufacture, dispensing and medicinal uses.

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**Arteriosclerosis:** Etiology, Pathology, Diagnosis, Prognosis, Prophylaxis, Treatment. By Louis M. Warfield, A.B., M.D., Instructor in Medicine, Washington University Medical Department, etc. With an Introduction by W. S. Thayer, M.D., Professor of Clinical Medicine, Johns Hopkins University. Eight original illustrations. Pp. 172; price, \$2.00. C. V. Mosby Medical Book Co., St. Louis, Mo., 1908.

During the past two years much has been written on an old subject under a new caption and from another standpoint. Arteriosclerosis, Hypertension and all cardio-vascular conditions are beginning to receive the attention they deserve from investigators. The etiology has been more definitely determined, much interesting work having developed our knowledge of the

morbid changes that occur in the various coats of the arteries. Clinical examination has progressed proportionately in this class of cases, so that we now have more definite standards for the measurement of vascular tension. All this has led to our enlightenment in the management of patients as well as in the prognosis.

Warfield has attempted a difficult problem in his book, i. e., to condense into a small volume our knowledge on the protean subject of Arteriosclerosis. He has taken facts, and facts only, stated them clearly and concisely, and given us an altogether satisfactory treatise. He has warned us at the outset against laying too much stress on Arteriosclerosis as a disease, rather than ferreting out the real underlying cause and condition of the patient. He concludes frankly by telling us to be careful and treat the patient at all times instead of the disease. It is a little volume well worth purchasing for anyone who interests himself (as he should) in Arteriosclerosis.

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**A Manual of Diseases of the Nose and Throat.** By Cornelius G. Coakley, M.D., Clinical Professor of Laryngology in the University and Bellevue Hospital Medical College, New York. New (4th) edition, 12mo., 604 pages, with 126 engravings and 7 colored plates. Cloth, \$2.75 net. Lea and Febiger, Publishers, Philadelphia, 1908.

The fourth edition of Coakley's Manual of Diseases of the Nose and Throat has appeared, with the additions of recent progress in this branch of medicine. The most notable change is the classification of septal spurs and deflections under the one head of deformities of the septum, and the logical treatment of both conditions by submucous resection. The old Asch operation for deflections, so prominent in previous editions, together with the use of the saw for spurs, has been allowed to drop. It is unfortunate that the use of the tonsillotome and galvano-cautery on diseased tonsils still occupies so prominent a place in the author's regard. More space than ever before has been accorded diseases of the accessory sinuses, in accordance with the increasing recognition of the importance of these conditions. The balance of the text is very similar to previous editions, and closes with a chapter on remedies for local treatment often useful to the general practitioner.

The typographical work is up to the usual high standard of Messrs. Lea and Febiger.

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**Modern Medicine. Its Theory and Practice.** In

Original Contributions by American and Foreign Authors. Edited by William Osler, M.D., Regius Professor of Medicine in Oxford University, England; formerly Professor of Medicine in Johns Hopkins University, Baltimore; in the University of Pennsylvania, Philadelphia, and in McGill University, Montreal. Assisted by Thomas McCrea, M.D., Associate Professor of Medicine and Clinical Therapeutics in Johns Hopkins University, Baltimore. In seven octavo volumes of about 900 pages each, illustrated. Volume V, Diseases of the Alimentary Tract. Price per volume: cloth, \$6.00 net. Lea and Febiger, Publishers, Philadelphia, 1909.

This great work goes steadily forward to completion, the fifth of the seven volumes now being fresh from the press. It covers the great field of Diseases of the Digestive System and furnishes a thoroughgoing and authoritative exposition of a group of primary importance. The convenience of having the whole of the great divisions of disease in single volumes has evidently been borne in mind, and the same idea of logical classification and arrangement has been carried out even to the paragraphing, so that any desired item of information can be quickly found. Nothing could be simpler or better than the uniform presentation of each disease in sections dealing with the cause, pathology, symptoms, diagnosis, course and prognosis, and treatment. The paramount importance of the latter is recognized in the fulness with which it is considered.

*Modern Medicine* differs from most anything undertaken in the past in at least one very important particular, namely its cosmopolitanism. The world is a unit in these days of quick communication, a fact that is vastly beneficial to its inhabitants. The leaders of medicine are scattered through all civilized countries, but engaged in the same quest of knowledge wherewith to combat disease. This knowledge would be confined within very small circles were it not for some means of diffusion, such as *Modern Medicine*, which carries it to all who read English, a large section of mankind. Professor Osler has distinguished himself both as a great physician and a great editor. He not only knows medicine and is interested in every part of it, but also knows the men who are doing the best work everywhere. Consequently he has been able to select the best authority for each subject, and moreover to secure his co-operation. Such is the advantage of prestige and position.

It is scarcely necessary to point out the benefit which every physician can derive from possessing and consulting a work covering the entire domain of practical medicine and reflecting the world's latest and best knowledge. In these pages

he can qualify as never before to meet his responsibilities.

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**Orthopedic Surgery for Practitioners.** By Henry Ling Taylor, M.D., Professor of Orthopedic Surgery and Attending Orthopedic Surgeon, New York Post-Graduate Medical School and Hospital. Assisted by Charles Ogilvy, M.D., and Fred H. Albee, M.D., with 254 illustrations. Pp. XXIV+503. New York and London. D. Appleton and Company, 1909.

This book aims to give an outline of the essential facts in regard to deformities and crippling affections for daily use in general practice, without confusing descriptions of superseded or still doubtful theories and practices.

Division into a general, a special, and a technical section makes the book easy to refer to for information about any given case. Thus given a new-born baby with club-feet, the general practitioner, who, as in most cases of deformity, is the first to give advice, can turn readily to the account of club-feet in the special section, and find out just what should be done; by turning to the technical section, he readily finds just how to have made the required brace; if he desires broader information concerning congenital deformities, he finds it in the general section.

The total book leaves the impression of being carefully planned and executed, modern, judicious, inclusive, and supplying, as no other book does, by its excellent illustrations as well as by its readable text, the many needs of the general practitioner in orthopedic surgery.

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**Quacks and Grafters.** By Ex-Osteopath. Being an Expose of the State of Therapeutics at the Present Time, with some Reasons why such Grafters Flourish, and Suggestions to Remedy the Deplorable Muddle. Published 1908 by the Cincinnati Medical Book Company, Cincinnati, Ohio.

This is a breezy, readable, little monograph, written by one who has had experience as a dyed-in-the-wool osteopath, and who has also looked into regular medicine with some discrimination. He points out the inconsistencies of ordinary medical practice of therapeutics and shows how they tend to cause uncertainty and lost confidence among the laity. He particularly points out the lack of agreement and unanimity among physicians, which often holds them up to absolute ridicule. But he recognizes in the main the ultimate triumph of medical practice and urges the advantages of organization to hasten that end. He mercilessly exposes the mercenary motive of sectarian medicine, and of osteopathy in particular.



The book is written in a trenchant style, sincere, direct, and fearless. It must be of distinct interest to every physician and is the kind of book he ought to leave on his reception room table, and help to disseminate in all possible ways. As an educator it is equal to Adams's "Great American Fraud."

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**Progressive Medicine.** A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, Vol. XI, No. 1, March, 1909. Octavo, 277 pages. Per annum, in four paper-bound volumes, containing 1,200 pages, \$6.00 net; in cloth, \$9.00 net. Lea and Febiger, Philadelphia.

We have several times in the past expressed the opinion that "Progressive Medicine" is the best of the so-called year books. It is prepared by men who are eminently fitted both for selecting the material and for making comments from their own experience on the same. It appears quarterly, each department being taken up once in the year.

The present number contains reviews of the important articles which have appeared since March, 1908, in the following departments: Surgery of the Head, Neck, and Thorax, by Charles H. Frazier; Infectious Diseases, including Acute Rheumatism, Influenza and Croupous Pneumonia, by Robert B. Preble; Diseases of Children, by Floyd M. Crandall; Rhinology and Laryngology, by D. Braden Kyle; and Otology, by Arthur B. Duet.

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**Therapeutics of Radiant Light and Heat and Convective Heat.** By Wm. Benham Snow, M.D., Author of "A Manual of Electro-Static Modes of Application, Therapeutics, Radiography, and Radiotherapy," "Currents of High Potential of High and Other Frequencies," Editor of the Journal of Advanced Therapeutics, and late Instructor in Electro-Therapeutics in the New York Post Graduate Medical School. Scientific Authors' Publishing Co., 349 West 57th St., New York. Price \$2.00 net.

This manual of upwards of 100 pages, illustrated and containing eight full page plates illustrating the methods of treatment, has been prepared to meet the demand for a condensed and practical manual on Radiant Light and Heat Therapy. Chapters have been added showing the contrast between Radiant Light and Heat, and Convective Heat. A chapter is also included showing the comparative actions of Radiant Light and Heat and the Roentgen Ray.

The work has been prepared with great care as

to accuracy and detail, and includes the physical and physiological actions and therapeutics of the subjects treated.

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**Saunders' Pocket Medical Formulary.** By William M. Powell, M.D., Author of "Essentials of Diseases of Children." Ninth Edition. In flexible Morocco, \$1.75 net. W. B. Saunders Co., Philadelphia.

This is a handy pocket edition of formulae, neatly bound, with blank pages interspersed for writing in additions. The prescriptions are selected from the writings of various authorities, credit being given in each case. They are arranged under diseases, to which there is a convenient thumb index. Dosage has been adapted to the 8th revision of the U. S. P.

In addition to the prescriptions there are dose tables in both apothecaries' and metric systems. a list of incompatibles, tables of weights and measures, gargles, eruptive fevers, poisons, a surgical remembrancer; warnings to patients and friends, formulas for hypodermic medication, obstetrical information, diet table, and facts about drugs and materials used in antiseptic surgery.

This formulary is one of the best and most complete published.

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**Clinical Diagrams.** By James C. Wilson, M.D., Physician to the Hospital of the Jefferson Medical College. 25 sets, \$0.50 net. J. B. Lippincott Company, Philadelphia.

These diagrams are designed for the graphic representation of clinical phenomena, for preservation with the notes of cases. A set consists of 6 diagrams of head, neck, and trunk—male and female, anterior and posterior, male right and left sides. They are neatly printed and very reasonable in price.

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### Books Received.

**Report of the Michigan Association for the Prevention and Relief of Tuberculosis for 1908-1909.** Compiled by the Secretary, Aldred Scott Warthin, M.D., Ann Arbor, 1909.

**Backbone.** Optimistic Selections. By S. De Witt Clough, Chicago. Paper. Price 50 cents. Published by the author.

**Cosmetic Surgery.** The Correction of Featural Imperfections. By Charles C. Miller, M.D., Second Edition, enlarged. 160 pages; 96 illustrations. Published by the Author, Chicago, 1909.



### Council on Medical Education.

The Fifth Annual Conference of the Council on Medical Education of the American Medical Association was held at the Auditorium Hotel, Chicago, on April 5th. The morning session was devoted to the address of the chairman, Dr. Arthur Dean Bevan, of Chicago, the report of the secretary, Dr. N. P. Colwell, also of Chicago, and to a series of reports on "Medical Curriculum." The committee having this in charge has been studying the many questions connected with the scope of medical teaching. The names of those on the committee are a guarantee that the work has been carefully done. The reports were as follows: Anatomy, Prof. Charles R. Bardcen, University of Wisconsin; physiology, Prof. E. P. Lyon, St. Louis University; pathology, Prof. W. T. Councilman, Harvard; pharmacology, Prof. Torald Sollman, Western Reserve; medicine, Prof. George Dock, Tulane; surgery, Prof. Charles H. Frazier, University of Pennsylvania; obstetrics and gynecology, Prof. Joseph B. De Lee, Northwestern; eye, ear, nose and throat, Prof. G. E. de Schweinitz, University of Pennsylvania; dermatology, Prof. W. A. Pusey, College of Physicians and Surgeons, Chicago; hygiene, Prof. F. F. Wesbrook, University of Minnesota.

At the afternoon session there were two addresses. Dr. Richard H. Whitehead, Dean of the Department of Medicine of the University of Virginia, spoke on "Some Results of Higher Standards of Preliminary Education." Dr. Fleming Carrow, member of the Michigan State Board of Registration in Medicine, spoke on "The Character of the State Medical License Examination." Dr. Carrow received from Governor Warner a special commission to attend this meeting.

### State Board Notes.

A special examination will be held by the Michigan State Board of Registration in Medicine, on May 24, 25, 26, 1909, at Harmonie Club, Detroit, commencing at 8:30 a. m. Applicants are requested to file their application blanks at least one week prior to the examination.

The Board has notified the several medical colleges upon its recognized list, that in future it will require a demonstration of an applicant's fitness to do practical refractive work, in addition to the usual written paper upon diseases of the eye, ear, nose and throat. The examination

on this subject will be conducted by a specialist and will constitute an integral part of the examination, and failure to obtain fifty per cent. of possible standing will subject the applicant to refusal of license.

Additional registrations are as follows:

Guy Luvergne Bliss, Three Rivers, Rush Medical College, Chicago, 1908. Reciprocity with Illinois.

James Matthew Van der Ven, New Era, Mich., Long Island Hospital College, New York, 1891. Reciprocity with Wisconsin.

Fred E. Murphy, No. Manitou Island, Mich., Detroit College of Medicine, 1906. Qualification of group III. (Exemption under act of 1903.)

## County Society News

### Antrim.

At a postponed meeting of the Antrim County Medical Society, held in Bellaire, March 3, 1909, the following officers for 1909 were elected:

President, L. L. Willoughby, Mancelona; Vice-President, A. T. Bodle, Bellaire; Secretary-Treasurer, Wm. A. Evans, Bellaire. Delegate to State convention, L. L. Willoughby, Mancelona; Alternate, R. E. L. Gibson, Central Lake. Director for three years, C. V. Hinman, Bellaire; Director for one year, J. H. Mosely, Mancelona. Program Committee, Drs. Bodle, Mosely and Close.

Owing to the difficulties of winter travel, it was decided to hold most of the meetings during the summer months. The Society will meet in Bellaire, the first Wednesday of May, July and September, the place of meeting being subject to change.

WM. A. EVANS, *Sec'y.*

### Berrien.

At the annual meeting of the Berrien County Medical Society, held in St. Joseph, January 21, 1900, the following officers were elected:

President, Dr. F. M. Kerry, Benton Harbor; 1st. Vice-President, Dr. S. S. Green, Berrien Springs; 2nd. Vice-President, Dr. H. G. Bartlett, St. Joseph; Secretary, Dr. H. C. Hill, Benton Harbor; Treasurer, Dr. C. W. Merritt, St. Joseph. Delegate to State meeting, Dr. C. E. W. Witt, St. Joseph; Alternate, Dr. Z. G. Walker, Benton Harbor.

Dr. W. L. Wilson read a paper on "Practical Points in Diseases of the Heart."

Dr. Z. G. Walker, retiring President, delivered an address entitled, "Some of Our Duties."

A committee was appointed to investigate the milk and dairy conditions in St. Joseph and Benton Harbor and suggest any plan that they thought practical for improvement in the quality of milk.

The society is in flourishing condition. We are following the outline for Post Graduate work and have interesting and instructive meetings every two weeks.

H. C. HILL, *Sec'y*.

### Calhoun.

At our last meeting, March 2, our program consisted of a symposium on "Anesthesia," being a partial report of the committee appointed six months ago for that purpose. The committee has been retained and will make further study and report later.

During the absence of the secretary in Europe, Dr. H. A. Powers will act as secretary of the society.

A. S. KIMBALL, *Sec'y*.

### Genesee.

The members of the Genesee County Medical Society identified with the Oak Grove Sanitarium, delightfully entertained the society at the sanitarium March 2nd. A short program was given, which was followed by luncheon and a social hour. About fifty members of the profession were present.

The papers of the evening were read by Dr. Wadsworth Warren, of Detroit, on "Operations for Deflection of the Nasal Septum," and by Dr. James A. MacMillan, of Detroit, on "Principles of Surgery of the Appendix." The papers were followed by an interesting discussion. After-dinner talks in the interest of more perfect organization of the county society were participated in by Drs. Hitchcock, Morris, MacMillan, Warren, Mahaney, Smith, B. E. Burnell, E. D. Rice, M. S. Knapp and C. B. Burr. During the evening, Dr. J. C. Willson read an original poem.

The physicians present from outside Flint were: Drs. Wadsworth Warren and Charles W. Hitchcock, of Detroit; C. D. Morris, of Pontiac; R. C. Mahaney, Owosso; M. B. Smith and B. G. McGarry, Fenton; A. Goodfellow, Clio; J. F. Rumer, Davison and A. S. Wheelock, Goodrich.

Letters of regret were received from Dr. H. B.

McMullen, Cadillac; Dr. C. J. Ennis, Sault Ste. Marie; Drs. Mortimer Willson, of Port Huron and Louis Hirschman, of Detroit, members of the Michigan State Medical Society Council, of which Dr. Burr is also a member; Drs. A. I. Noble and H. Ostrander, of Kalamazoo; and Dr. B. R. Schenck was detained by the sudden death of his father. The society sent him a message of condolence.

B. E. BURNELL, *Sec'y*.

### Ingham.

The seventh annual meeting of the Ingham County Medical Society was held at the home of Dr. R. E. Miller, Lansing, on November 12, 1908. Reports of the retiring president and secretary were received, after which dinner was served at 5:30 p. m.

The officers elected were: President, Dr. O. H. Bruegel, of East Lansing; Vice-President, Dr. C. H. Bruecker, of Lansing; Secretary-Treasurer, Dr. Samuel Osborn, of Lansing.

Meetings of the Physicians' Clinical Club have been held nearly every week, on Tuesdays at 8:30 p. m. Two of these evening meetings have been held in Mason.

In order to give the members residing outside the City of Lansing an opportunity to more frequently attend and to get the experience of such members, it is the intention to hold more meetings outside the city.

The March program of the Clinical Club was: March 2nd, "Ductless Glands," Dr. O. H. Bruegel; March 11th, "A New Method of Diagnosis and Treatment of Fistulous Tracts, Tubercular Sinuses and Abscess Cavities," Dr. C. L. Barber; March 16th, "Hemorrhoids," Dr. C. V. Russell; March 23rd, "Pruritus," Dr. C. H. Brucker; March 30th, "Gynecology," Dr. L. W. Toles.

SAMUEL OSBORN, *Sec'y*.

### Ionia.

The Ionia County Medical Society held its meeting on March 11th, with the following program as the attraction:

Paper: "The Heart," by Dr. J. J. Defendorf, Ionia. Discussion opened by Dr. A. E. Gesler, Saranac.

Paper: "Treatment and Management of Diabetes Mellitus," by Dr. Joseph F. Pinkham. Discussion opened by Dr. David McClurg, Portland.

Owing to the unavoidable absence of Dr. Pink-

ham, we deferred his paper on "Diabetes Mellitus" to the next meeting.

Dr. Defendorf's paper on "The Heart" was a scholarly production and was greatly admired and generally discussed.

Two new names, Drs. Strahan and Hargraves, were added to our list of members.

The smallness of attendance caused us to defer action on all legislative matters until our next meeting.

C. S. COPE, *Sec'y.*

### Isabella.

The following resolutions were passed by the Isabella County Society, and a copy sent to each member of the Legislature:

Mt. Pleasant, Michigan, March 4, 1909.

To the Legislators of the State of Michigan, Lansing, Michigan.

Gentlemen:—The Physicians and Surgeons of Isabella County submit the following for your consideration relative to the "Optometry Bill."

The eye is the most beautiful and useful, while it is also the most delicate organ in the human body, hence it is that the eye and its diseases and errors of refraction have formed a special department in our University and in every incorporated Medical Institution, not only in the United States, but the world over. Its study, care and treatment are confided to a special department as is surgery, genecology, anatomy and chemistry.

A great deal of misapprehension is created in the ordinary mind by the words "specialty" and "specialist." There is not, nor can there be, any specialty in medicine for the person who has not pursued a full medical course, because the human economy is not built in sections but forms a complete, harmonious whole. Consequently, there cannot be "heart doctors" who know nothing but the heart, "lung doctors" who know nothing but the lungs, nor "eye doctors" who know nothing but the eye. It is absurd. And what is true of medicine, is also true of law, of engineering, etc., as every professional man knows. These remarks are pertinent in view of the so-called "Optometry Bill," now before the State Legislature. We regard the enactment of such a bill into a law as pernicious in the extreme. It is an attempt to create a quasi-profession without any proper fundamental training, nor is there any adequate provision in the bill for such training in the future. Every legislator knows that there is a

horde of people in this state, whose business is to make a house to house canvass in order to sell spectacles and their chief business is not to fit eyes, but to make a sale. The proposed legislation would not improve the mental status of these people, but would give them better opportunity to prey upon their victims, by furnishing them with a display card with the "State of Michigan" in big letters and a red seal. Surely, this would be an excellent method, not for the protection of the people, but for their effectual deception. They say that "Optometry" has come to stay. Truly, spectacle venders are always with us, the people know them for what they are, and if they wish to deal with them, that is their business. The proposed law would simply enable the Optometrist to represent himself as that which he is not. The state contains several men whose exact knowledge of this subject is beyond peradventure of a doubt, e. g., Prof. Parker, whom the Regents of the University of Michigan have placed at the head of the Eye Department, Dr. Flemming Carrow, who formerly occupied that position, Dr. Eugene Smith of Detroit, and many others. If the Optometrists could show that they possess the requisite knowledge by going before a competent board of examiners, they would, at least, be acting with some show of sincerity. Who are the proposed examiners? Persons who have been five years in the business of selling glasses, and whose names are furnished by the president and secretary of their society. What qualifications have these worthies? No competent board has yet determined. As to schools and colleges of the so-called Optometrists, they are hazy in the last degree. There is nothing to prevent any jeweler or optician or doctor from calling himself a college of optometry and issuing diplomas at will. We might recapitulate as follows:

1. Professional colleges refuse instruction to persons who desire to follow a specialty, until such persons have completed the regular general course. The idea being that one must understand the general subject before attempting to specialize.

2. The University of Michigan, encouraged by the Legislature, has made strenuous efforts to increase its professional standard of efficiency. It has raised the medical course to four years, besides demanding increased preliminary qualifications. The passage of the proposed bill would undo with one hand what the legislature has built up with the other, by opening a short cut to an



important and delicate medical specialty.

3. Professional licenses are issued to protect competent men and the laity from the incompetent. The proposed law would protect neither, but would give a legal standing to a body of men unworthy of such recognition and standing, hence such a bill is manifestly unjust.

4. It would create a so-called profession where none exists, where none is needed, where none is desired, hence it is unnecessary.

5. It would create a specialty within a specialty without the general information and knowledge possessed by the real specialist, hence it is absurd.

6. It would divert work from the educated and competent specialist to incompetent persons, hence it would be unjust both to the medical profession and to the laity.

7. Medical specialists are governed by a code of ethics in their relations with one another, with their patients and with the public.

8. "Optometrists" are travelers who go about advertising and seeking patients, a thing in itself unnecessary, for, if, one really possesses merit, it will be found out where one lives and patients will seek him. Optometry is commercialism, pure and simple.

For these reasons, we, physicians and surgeons of Isabella County, protest against the passage of the "Optometry Bill."

Signed by Dr. James McEntee, Dr. P. E. Richmond, Dr. C. D. Pullen, Dr. C. M. Baskerville, Dr. A. T. Getchell, Dr. Allen Keene, Dr. M. Sweeney, Dr. Amanda D. Holcomb, Dr. C. E. Goodwin, Pres.; Dr. C. R. Southwick, Dr. L. B. Dickinson, Dr. J. E. Gruber, Dr. Donald McRae, Dr. H. Abbott, Dr. B. F. Johnson, Dr. C. J. Ettinger, Dr. B. C. Shaw, Dr. S. E. Gardiner, Sec.

#### Jackson.

The following papers and clinics were presented to the Jackson County Medical Society, at Jackson City Hospital, March 4, 1909:

"Superiority of Vaginal Cesarean Section over Manual or Instrumental Dilatation in an Eclamptic Patient with Rigid Cervix." (Lantern slide demonstration.) Dr. Reuben Peterson, University of Michigan.

"The Surgical Treatment of Gastric Ulcer." Dr. R. E. Balch, Kalamazoo.

Clinic: "A Case of Congenital Deformity." Dr. D. E. Robinson, Jackson, Mich.

A boy—C. L.—14 years old, entered the hospital February 5, 1909, with both legs flexed on

the thighs at nearly right angles, and double equino-varus. It was deemed best to work on the left leg first. The patient was anesthetized, extension made at the knee, shortening the hamstring muscles as much as possible. The leg and foot were put up in a plaster cast. This procedure was repeated on February 11th and 17th. On February 20th, the tendons of the hamstring muscles and the tendo-Achilles were cut. Excision of the astragalus and part of the calcaneus was done and a Phelps operation performed on the inner side of the foot, thus placing it in a normal position. The foot and leg were put up in a plaster cast. The boy was up on crutches on March 12th. As soon as the boy's condition will warrant, work will be begun on the right leg.

Dr. Strong, of Jackson, presented a case showing the healing of a tuberculous sinus by Bismuth injections after the method of Dr. Beck, of Chicago.

R. GRACE HENDRICK, *Sec'y.*

#### Kent.

The bringing before our society of such men as Dr. Ballenger of Chicago, Dr. Woods Hutchinson of New York City, Dr. Hitchcock of Detroit, and Dr. Hewlett of Ann Arbor has increased the average attendance at our regular meetings from 28 last year to an average of 72 for this year. Our smallest attendance thus far has been 52 and our largest 106. Our largest attendance last year was 54.

At our last meeting the following report of our Committee on Public Health and Legislation was unanimously adopted and a committee of three was appointed to go to Lansing and endeavor to carry out the recommendations of the report, working with our committee from the State Society.

Your committee, to whom was referred the communications of the Committee on Legislation of the State Society, begs leave to report as follows:

Your committee believes, since the nurses are educated by the physician, in institutions controlled by the physician, and thus under his supervision from the time they begin training until graduation, and because during their entire career they will be under the direction of medical men, and because services from nurses make or mar the physician's work, that the physician should be the one to pass final judgment on their qualifications for nursing, and that in the opinion

of your committee, it seems like expecting too much for the graduated nurses to ask for a board composed of nurses *to say which hospitals, organized and conducted by physicians, shall be recognized as fit to educate nurses.* And further we would recommend a three year course for nurses as proper, provided, they shall not be permitted to do private nursing until they have graduated, i. e., to say, that the Hospital Training Schools shall not sell their services, but that they shall be kept in the hospital under training and their services, which have become valuable through experience, utilized, thus making up for the time they spend during their earlier days in becoming proficient.

That the proper body to recognize hospitals as training schools and examine their graduates as a preliminary to practice nursing is the State Board of Registration in Medicine and not a separate board. This will obviate the necessity of duplicating boards and thus lead us nearer the modern trend of centralizing authority.

In relation to the Osteopathic Bill contemplated, we would suggest that the state has already gone far enough towards recognizing this cult and that it would be far better for us to insist on their having proper medical qualifications as a preliminary to their practicing, and then if they still see fit to practice their original belief, the public will at least receive the benefit of having a man work for or serve them who has sufficient knowledge to prevent him from doing harm.

Regarding the Optometric Bill: The Committee would not care to oppose this bill, if the Legislature will incorporate an amendment providing for the necessity of an ophthalmic examination by a regularly registered physician, the report of his findings to be embodied in a written certificate given to the patient, before any optician shall be permitted to experiment on his eyes or adjust glasses to them.

That, finally, we would recommend that the society send a representative to Lansing to appear before the Legislative Committee to present this matter clearly to them and that a copy of these resolutions be sent to our Kent County members of the Legislature and also to the State Committee on Medical Legislation.

S. C. GRAVES,  
J. G. HUIZINGA,  
W. J. DU BOIS,  
Committee.

Our Committee on Anti-Tuberculosis Work made the following report:

Since the last report, one month ago, we have filled three church requests for speakers and have spread the propaganda to a combined audience of some 500 people. Your committee recommend that you discontinue the work of the lecturing phalanx for the present. The Committee also recommends that some means should be sought whereby we may accomplish the reporting of a larger percent of tuberculosis patients now living in the city and to this end suggests that our society recommend to our Board of Health some means, formulated with this object in view.

The Committee is disposed also to suggest that a communication from our Secretary be sent to the Local Anti-Tuberculosis Society commending their dispensary plan and suggesting that some means be adopted whereby the benefits of this dispensary may be brought more fully to the notice of the public in general. The housing plans of the Social Committee of the Board of Trade were discussed and a communication of approval is suggested to be sent to that committee.

This *report* with its *recommendations* was adopted.

Our Milk Commission, as its Chairman reported, "Is sawing wood" in arranging for the Pure Milk Contest among local dealers during the early spring months.

With the view in mind of following up the missionary work that we are attempting to accomplish with our Bulletin and also in connection with the adoption of a new bylaw regarding the qualifications and eligibility to membership, a Membership Committee was appointed who were instructed to endeavor to obtain the application of every eligible physician in the county.

F. C. WARSHUIS, *Sec'y.*

#### Lapeer.

The last meeting of the Lapeer County Medical Society was held at the Home of the Feeble Minded and Epileptic in Lapeer, January 13, 1909.

Dr. J. H. Carstens, of Detroit, was present and gave an interesting talk on "Gall Stones," advocating early operative procedure in such cases.

"Diabetes Mellitus," by Dr. H. E. Randall, of

Lapeer, was a comprehensive paper on the subject, and was enjoyed by all.

"An Interesting Case" was presented by Dr. J. H. Burley, of Almont. A number of physicians having also seen the patient, the discussion following was particularly lively.

The physicians and their wives were guests of Dr. and Mrs. Chamberlain at dinner.

Resolutions were passed thanking Dr. Carstens for his presence and Dr. and Mrs. Chamberlain and medical staff for the generous hospitality shown the Society.

The next meeting will be held at North Branch, April 14, 1909.

J. O. THOMAS, *Sec'y.*

### Ottawa.

The Ottawa County Society has sent the following letter to the senator and representatives of the district:

Holland, Mich., March 13, 1909.

Honorable Sir:—

We, the undersigned members of the Ottawa County Medical Society, residing in Ottawa, Allegan and Kent Counties, respectfully call your attention to the Giles Optometry Bill which has been introduced into the State Legislature.

We protest against the bill as being unfair to the people of the State of Michigan and call your attention to the following points: It is unfair to the *people* to have the Opticians registered because—

First.—The fitting of glasses is as much a part of the practice of medicine as the healing of ears. There is no sense more important than the sense of sight. There are no more delicate organs than the eyes, the function of which are so important to the patient. This is especially true of the child and it is fast becoming recognized that many delinquent children are so only because of defective eyesight. Is it fair to allow these children to be treated by so-called Opticians, Optometrists, Graduate Opticians, Optical Specialists and such products of short courses in *optical schools* or graduates of no school at all? These schools have no connection with any medical institution and a diploma is obtained by a short course or a diploma fee alone. No one without a thorough medical training can understand many of the varied diseases which affect or are affected by the eye. Licensing the opticians means approving of their treating such diseases.

Secondly.—The people are imposed upon by such so-called "specialists" because they are led to believe that a license or diploma means full qualifications, whereas it does not. No child should be fitted with glasses without the use of atropin or one of its substitutes in order to insure correct fitting. This the optician is unable to do.

Thirdly.—Many opticians impose upon the people by advertising "Examination Free" or "Eyes Examined Free." The public is made to believe that it pays nothing for examination. The patient does, however, pay for that examination in the price added to the real cost of the glasses.

The bill is not fair to the physician who has devoted his time and money to the development of this specialty after he has passed a complete course in a medical school, studying Medicine, Surgery, Gynecology, Obstetrics, Hygiene, Chemistry, Pathology, etc. It is only by such a complete course that one can be fitted for such a specialty as the diseases of the eye. The specialist has given years of his time and hundreds of dollars in money to this study and it is not fair to allow an optician to attempt that same work without similar preparation.

The Giles bill provides for examination by opticians who are to be chosen from their own number. Now, then, can that examination be anything like it should be? The optician's lawful business is to make lenses and frames and to supply them on physicians' prescriptions, but it is not his business to fit them to the patient.

The health and sanitation of the people of Michigan have been left in the hands of the Medical Profession. This question belongs to that heading and it rests with the profession to protest. Now it rests with you to see that the people receive a square deal.

Very respectfully yours,

J. W. Van Den Berg,	C. J. Fisher,
E. Hofma,	C. P. Brown,
W. S. Walkley,	J. A. Mabbs,
T. G. Huizenga,	H. Kremers,
B. B. Godfrey,	J. J. Mersen,
T. A. Boot,	R. J. Walker,
H. J. Poppen,	D. G. Cook,
J. F. Peppler,	W. A. Maxfield,
W. J. Presley,	A. Van Der Veen,
E. E. Brunson,	A. T. Godfrey,
J. Masselink,	C. H. Thomas,
H. A. Stroud,	N. H. Kassabian,
N. Coburn,	J. S. Walling,



F. D. Smith,	W. G. Winter,
D. B. Lanting,	J. C. Cousins,
P. J. De Pree,	A. J. Brouwer,
W. De Kleine,	E. T. Brunson,
H. B. Baker,	A. Turner,
N. J. Cherry,	J. H. Mowers,
J. H. R. Gorvers,	E. D. Kremers, Sec'y.
A. Leenhouts, Pres.	

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## News

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A bill has passed the Illinois legislature authorizing cities and villages to levy a special tax of one mill to construct and maintain tuberculosis sanatoria. This will secure for Chicago an amount close to \$160,000.

The Ingham County Anti-Tuberculosis Society has been recently organized with affiliations with the State Association. The directors consist of Rev. W. C. Hicks, R. E. Olds, Rev. F. G. Ward, Smith G. Young, Dr. L. W. Toles, Dr. J. A. Campbell, Mayor J. S. Bennett and Dr. Clara M. Davis.

In New York a bill has been introduced into the legislature which requires the Supreme Court to designate at least ten and not more than sixty physicians in each judicial district as medical expert witnesses, to serve when called in any civil or criminal action by the court or either party, for such compensation as the presiding judge at the trial allows, and to be at once paid by the fiscal officer of the district in which the trial is held. The bill does not limit the rights of parties to call other expert witnesses as at present.

Dr. A. S. Kimball, of Battle Creek, left on April 12, for a four months' trip to Europe. He will spend three months as clinical clerk at the Great Ormond Street Hospital for Sick Children. During Dr. Kimball's absence, the secretaryship of the Calhoun County Medical Society will be filled by Dr. H. A. Powers.

Dr. Richard Leuschner, of Mt. Clemons, has announced his affiliation with the Avery Hotel Company of that city.

Dr. David Inglis has removed his office from the Majestic Building to 574 Woodward Ave., corner of Erskine St., Detroit.

Announcement has been made of a new journal to be devoted to pharmacology, to be known as The Journal of Pharmacology and Experimental Therapeutics. It is to be edited by Dr. John J. Abel, Professor of Pharmacology at Johns Hopkins University. Dr. C. W. Edmunds, Professor of Materia Medica and Therapeutics at Ann Arbor is one of the twelve associate editors. Subscriptions at \$5.00 per volume may be sent to The Williams & Wilkins Publishing Company, 2427 York Road, Baltimore.

To celebrate the fiftieth anniversary of his entering upon practice, a banquet was held in honor of Dr. W. F. Breakey, at the Michigan Union Club house, Ann Arbor, March 31st.

When some ignorant or thoughtless individual spits in the street-cars of Minneapolis, the conductor hands him a red card; and as the citizens are all aware what information the card conveys, the recipient is at once stared at. If he has any sensitiveness in his nature the lesson is never forgotten.

An Easter tuberculosis stamp has been designed by Miss Clara Dyer, of Detroit, and is for sale by the State Tuberculosis Society. The design is said to be very handsome. There will be two classes, one at one cent and the other at five cents. The proceeds of the sale will be devoted to the work of the State Tuberculosis Society.

Dr. H. J. Hornbogen, Marquette, returned March 9th from his trip abroad, having spent several months in post graduate study in Vienna and in visiting the various hospitals in London.

Extensive improvements are to be made shortly on the General Hospital at Port Huron, Mich.

Petitions to the state legislature asking the passage of a state tuberculosis law and an increase to the sanatorium at Howell, was circulated in Ann Arbor by signers recently.

In Florida a "State Health Day" was designated and held on February 12th, when programs were carried out in the various schools, including quotations regarding health, the care of the body, fresh air, and alternating readings of sections from the health catechism.

Dr. Herman C. Emmert, Detroit, has been appointed to succeed Dr. Earl as house physician in the Wayne County Asylum at Eloise. Dr. Earl was asked to resign, but is contesting the complaints alleged against him.

Dr. P. H. Mullooney has been appointed to

succeed Dr. L. K. Green, in charge of the Detroit office of the Bureau of Animal Industry. Dr. Mullooney was sent here from New York last fall to assist in checking the outbreak of foot and mouth disease. Dr. Green has been transferred to New Haven, Conn.

Dr. Gustav Nicolai, of Detroit, sustained a bad bruising and shaking up recently while attempting to board an electric car.

Dr. W. A. Spitzley, of Detroit, has returned from a four weeks' trip in Arizona and California.

The following certificates of registration have been revoked by the Michigan State Board of Registration in Medicine: Archibald M. Waters, Albert A. Patterson, Harriet A. Freemeyer, Thesis Stinchcomb.

"Dr." Eliza Laudau, a notorious "woman's specialist" in Detroit, has been found guilty of manslaughter in connection with the death of a woman on whom she had performed a criminal operation.

Dr. F. Smith, Grand Haven, was the defendant in a damage suit by a patient who claims she was neglected by Dr. Smith after the birth of a child. The claim is for \$10,000 damages.

A fine lecture room is being fitted up in the Homeopathic Hospital, in Ann Arbor, in the northwest part of the building, under the male medical ward. It is to have a seating capacity of over 200.

Dr. J. B. Chapman of Pontiac has moved to Davisburg.

Dr. F. B. Walker has been away on a trip to California.

Dr. Kenneth Dick has moved from Port Sanilac to Applegate, where he has taken the practice of Dr. John Kelly.

Dr. J. E. McIntyre, resident at Harper Hospital, Detroit, has just recovered from scarlet fever.

The many friends of Dr. H. M. Rich of Detroit, will be glad to learn that he has recovered from the severe attack of ophthalmia, and has resumed practice.

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## Marriages

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V. Joseph Blanchette, M. D., of Walkerville, to Miss Catherine A. Otterbein, of Grand Rapids, February 22.

Howard Force, M. D., Ludington, to Miss Francis Penton, Detroit, February 2.

Dr. Henry J. Van der Berg and Miss Edna E. Gibson, of Petoskey, Mich., were married at the home of the bride's sister, Mrs. Frank Hamilton, in Grand Rapids.

William J. Stapleton, M. D., to Miss Mamie S. Ireland, both of Detroit, January 30.

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## Deaths

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George Washington Beeman, M. D., a graduate of the Detroit College of Medicine in 1899, died at his home in Harbor Springs, from the effects of carbolic acid, believed to have been taken with suicidal intent, aged 42.

Frank Jackson MacNett, M. D., Traverse City, a specialist in eye, ear, nose and throat diseases, died at his home, February 28, from pneumonia, aged 37.

Isaac A. Thompson, M. D., Grand Rapids, died at St. Mary's Hospital, February 25, aged 42.

Ambrose Brown, M. D., for many years a practitioner of Grand Ledge, and a Civil War veteran, died at his home in Lansing, February 24, from cardiac dropsy, aged 68.

Wesley McGuffin, M. D., of Battle Creek, died in Phoenix, Ariz., March 1, from tuberculosis, aged 42.

Theodore Vanheuson Law, M. D., died at his home in Dearborn, February 24, aged 66.

William L. MacBeth, M. D., died at his home in Galesburg, February 17, aged 67.

George Fox, M. D., of Caledonia, died at his home, January 27, of senile debility, aged 87.

Julian A. Buell, M. D., for over forty years a practitioner in Michigan, died at his home in Franklin, February 3, aged 69.

A. L. Kilmer, M. D., of Bay City, died at the hospital in Big Rapids, March 1, as the result of an operation to remove a tumor from his brain.

Thomas Sterling Barclay, M. D., for thirty-four years a practitioner in Detroit, died at his home early in March, from dropsy, aged 68.

## Correspondence.

Ann Arbor, March 17, '09.

To the Editor of the Journal:

In the paper entitled "The Diagnosis and Treatment of Pleurisy with Effusion," which I contributed to the March 1908 number of THE JOURNAL, there occurs an error on page 120. The lines reading: "the weekly injection of ascending doses of Koch's old tuberculin" and "It is well to begin with as small as 1/1000 or 1/500 millegram of TA" should read, "the weekly injection of ascending doses of Koch's new tuberculin (TR.)" and "It is well to begin with as small a dose as 1/1000 or 1/500 millegram of TR."

Yours truly,

FRANK SMITHIES, M. D.

Chicago, Ill., March 1st, 1909.

To the Editor:

I am collecting material for a paper upon atropine as a hemostatic, and would be obliged to any of your readers who would send me notes of their experience with this remedy. I am particularly anxious to receive adverse reports, as well as those favoring the remedy.

Thanking you for the courtesy of inserting this note, I remain

Very sincerely yours,

WILLIAM F. WAUGH, M. D.

1424 E. Ravenswood Park.

Muskegon, Michigan, March 2, 1909.

Chairman Michigan State Medical Society,  
Committee on Contract Practise.

Dear Doctor: At the last meeting of the Muskegon-Oceana County Medical Society the enclosed clipping, which is taken from a Coldwater paper was presented before the society by one of its members. The secretary was instructed to write to you concerning this article.

Can you give us any information concerning such a law regarding contract practice in Michigan? If so we would like all the information on this subject that you can give us.

Very truly yours,

V. A. CHAPMAN, Secy.

The clipping:—

New Law Prevents State Physicians from Forming Contracts With Factories.

LODGES ARE INCLUDED.

Think Technicality May be Dodged Successfully However by Verbal Understanding

Michigan physicians have recently become acquainted with the fact that a new state law prohibits them from making specified, written agreements with manufacturing companies and corporations of various kinds, to act as the medical representative of such concerns. The law also includes lodges in the list of institutions from which doctors are barred from making similar agreements.

Scores of physicians have been connected with companies as surgeons to whom all persons injured in the plant must go. Now, it is said, physicians may still have a verbal agreement with factories relative to this sort of thing. No written paper or instrument must exist between the physician and the company, however, showing that his services are retained by it. Summed up, the statute merely puts the ban on a physician practicing under contract.

Physicians were generally aware of the law, and it is said that the medical association and fraternity generally are the most active in ascertaining that the law is obeyed. Factory officials may still continue to recommend a physician to any person injured in a plant, but the injured party pays for the services of the doctor, not the company, as in many cases heretofore. The individual may be reimbursed by the concern, but this is none of the physician's business; he works for the individual, not for the corporation.

Bowen, Douglas, Whiting & Eaman  
Attorneys and Counselors at Law  
Moffat Building.

Detroit, March 10, 1909.

Dr. F. B. Tibbals,

99 Fort Street West, Detroit, Mich.

My Dear Sir: Your letter of recent date, enclosing letter of Dr. V. A. Chapman of Muskegon, secretary of the Muskegon Oceania Medical Association, with newspaper clipping, is duly received.

The newspaper item refers to the fact that there is a law in the State of Michigan prohibiting physicians from making written agreements with manufacturing companies and corporations



to act as their medical representative or advisor.

I have examined carefully the Michigan statute up to this date, and fail to find that any such act has ever been passed. This is the first suggestion that I have ever heard that such a law existed. It is possible that the present legislature has passed some act which would be the foundation for the newspaper item referred to, but this I very much doubt, and I have written to Lansing to make inquiry as to this fact.

*Act 157 of the Public Acts of 1907*, provides: "That it shall be a misdemeanor for any physician or surgeon to employ or solicit a capper or drummer for the purpose of procuring patients, or who shall subsidize any hotel or boarding house who shall pay or present to any person money or any other valuable gift for bringing patients to him."

*Act 164, Public Acts of 1907*, which is a general act, provides for: "Examination, regulation, licensing and registration of physicians and for the punishment of offenders against the act or that could in any way be construed as making it unprofessional or a violation of the ethics of the profession or of law, to act as medical adviser in the capacity mentioned."

I quote these two acts only as indicating the most recent legislation on the general subject of the conduct of physicians. They, however, relate in no way to the question raised by Dr. Chapman. If I hear that any act has been passed or any bill introduced in Lansing at the present legislature touching this subject, I will immediately advise you.

Very truly yours,

SAMUEL T. DOUGLAS.

Michigan House of Representatives

Lansing, March 11, 1909.

Mr. S. T. Douglas,

Moffat Building, Detroit, Mich.

Dear Sir: I have examined the index of bills introduced and find nothing that corresponds to the description that you give in your letter of March 10. The only bill that has been pointed out to me by the bill clerk of the house that seems to come any where near corresponding with that you ask about, is one to provide for the licensing of itinerant vendors of medicines and drugs. This I am satisfied is not what you had in mind.

Very truly yours,

GUY A. MILLER,

Representative.

**Murine Eye Remedy.**—"Murine Eye Remedy" is a nostrum that seems to have sought by its advertisements in the Chicago papers during the session of the American Medical Association, to lead the public to infer that the company manufacturing it had an exhibit in Exhibition Hall—a master-stroke of advertising impudence. Before the Food and Drug Act became operative, the carton in which this eye water was sold, read, "Murine a Positive Cure for Sore Eyes," etc. Since then it is called "a reliable relief." As found on the market today, "Murine" is an amber-colored liquid, practically odorless, having a slightly bitter taste, and giving an alkaline reaction to litmus. From the examination made in the Chemical Laboratory of the American Medical Association, which is reported in detail, it appears that "Murine" is essentially an aqueous solution of borax (12 grains to the fluid ounce, or 2.59 gm. per 100 c.c.) containing a trace of berberin or some golden seal preparation. It is of interest that it is variable in composition. A sample examined Nov. 30, 1907, contained a carbonate and responded to alkaloidal tests very feebly; while the product today contains no carbonate and shows definite traces of alkaloids. The possible psychic influence of the price is suggested. If instead of paying \$1.00 an ounce—the price charged—the public could buy it for 5 cents a gallon—the estimated cost—what would be the effect? The president of the Murine Eye Remedy Company is J. B. McFatricks are also, respectively, the president and Chicago; the treasurer is George W. McFatricks, M. D., also an eclectic, practicing in Chicago; O. F. Hall is the secretary. The McFatricks are also, respectively, the president and secretary of an institution with the sounding title of "Northern Illinois College of Ophthalmology and Otology," which confers no fewer than seven degrees, all with ornate diplomas. Why the term "otology" is added to the title of the college has not yet been determined. So far as learned, the eye is the only organ which is even supposed to be studied. The college, in fact, appears to be a sort of annex to the "patent-medicine" concern, occupying the same quarters. The danger in the indiscriminate use of the "Murine Eye Remedy" is probably a negative one in most cases—that it lulls the patient into a false sense of security—but that it may thus be a very real one is evident when we see it recommended in cases of ophthalmia neonatorum and other equally serious conditions.—*J. A. M. A.*, Nov. 7, 1908.

## Medical Economics

### Little Things Gleaned from Our Exchanges Concerning the Doctor Himself and the Business Side of the Practice of Medicine.

**Business Wisdom in Medicine.**—While medicine is a science and an art, still there are a large number of good men and their families who depend upon its practice for their daily bread. We may wisely have before us always the high ideals of our profession, but we cannot escape the grocer and the tax collector. No matter how hard the doctor works, the mortgage on his house is also at work, and the children's shoes are wearing out. In justice to his patients it behooves him to be a good doctor, and in justice to himself and his family it behooves him to be all this and a good business man as well.

Most of our medical publications devote their pages, quite exclusively, to the scientific and technical side of practice. It would be desirable for some of our better journals to give more attention to the doctor himself. He is the agent through whom all of this medical knowledge must be made to reach the people. He is not only the source of medical wisdom but the mechanism for its application. He, as well as the public, for the sake of his best efficiency, should be interested in his good condition and prosperity. It is not undignified to consider the practical business relations of the doctor to his professional work; indeed, it is a lack of wisdom not to consider them.—*N. Y. State Jour. of Med.*

**The Personality of the Doctor** counts for very much. It is one of the chief distinguishing points among physicians. A pleasing personality covers up a lot of ignorance and is most valuable stock in trade. In this matter it is the little things that count. It is a great art to be able to say the right thing at the right place and to say enough and then quit. The personal appearance of the doctor is important. He can always look neat and tidy and have a clean face. Women especially notice these things. The doctor's dress should never be loud or foppish. He should look well without having anything outlandish about him to attract attention. The doctor who wants to look sagely sometimes quits his barber and lets his hirsute appendage grow. In this matter he never fools anyone but himself. People can see

through his whiskers—they are not so ponderous. No freakish attire brings success in itself. Wisdom does not necessarily lie in whiskers and bald heads. Perhaps sympathy and genuine interest in patrons is a quality that most endears people to a physician, aside from his skill as a physician. That's why they will send into another county for you rather than patronize the man who lives across the street. The latter has not so much charity in his heart as you have, although he may know more than you about medicine. The successful doctor should strive to cultivate a pleasing personality. There is a charm about polite and courteous manners that is quite irresistible.—*Medical Summary.*

**What Medical Societies Will Do.**—Medical societies incite to more diligent study of books, journals, and to more accurate records of clinical cases and to more intelligent use of laboratory methods. Illustrative of this fact, Dr. Southworth, of Monroe, Mich., tells the following: There located in one of the byways of Monroe county, Mich., some years since, a graduate of a medical college formed to draw patients to the professors' offices rather than educate competent physicians. He had little preliminary training and less professional. Casually meeting him at the bedside the doctor invited his attendance at the next meeting of the Monroe County Medical Society. He came, was an eager listener to the reading of papers and the discussions thereupon and accompanied the doctor to his office eager to learn how he did his work. Shortly he returned, saying that he must have a microscope like the doctor's, and learn his ways of using it. Later he sought information on medical journals that he might select some for his own use. So from time to time he added to his equipment, attended the county society meetings, read an occasional paper—the first very crude, the next better—thus continuing till he became one of the accomplished young men of the county and his early death was widely lamented.—*LEARTUS CONNOR.*

Medical organization is identical with public health interests.

## Progress of Medical Science

### MEDICINE.

Conducted by

T. B. COOLEY, M. D.

**Studies on Thyroid.**—The latest bulletin of the Hygienic Laboratory of the Public Health and Marine Hospital Service describes some very interesting experiments by HUNT and SEIDELL on the relation of iodine to the physiological activity of the thyroid. There has been a good deal of dispute as to whether the activity varies in proportion to the iodine content, and if so, whether increased iodine content is a cause or merely an accompaniment of the greater potency. These experiments seem to go far to settle the question. The authors have succeeded in working out a very satisfactory test for the physiological effect of thyroid by the use of acetonitrile, a substance which causes poisoning by the gradual formation of hydrocyanic acid under the influence of tissue metabolism. The administration of thyroid has a very marked effect on the degree of this toxicity through the changes in metabolism which it produces—increasing the rapidity of cyanide formation in most animals, but diminishing it in the mouse. This action is so distinct and peculiar that it may be used also for determining the presence of thyroid products in the blood. The susceptibility of animals to the opium alkaloids is also increased by thyroid feeding, but with most of the other poisons experimented with no effect was observed.

The acetonitrile test was used first to determine whether or not iodine-free thyroid produced any physiological effect. Thyroids giving no iodine tests were obtained from children, and from various species of animals. All of them had some action in diminishing the susceptibility of mice to acetonitrile, and this varied greatly in the thyroids from the different animals—iodine-free samples from one species having occasionally more

effect than those from another species containing small amounts of iodine. The authors believe this to be due to an action of the thyroglobulin which has been denied by some, and the differences they ascribe to the varying amounts of this substance known to occur. A second set of experiments was with thyroids from animals of the same species. Commercial desiccated sheep thyroid was used, and in view of the results obtained it is interesting to note that the percentage of iodine in the preparations used varied from 0.06 to 0.38. The experiments were elaborate, and the technic carefully worked out. The results showed almost an exact parallelism between physiological action and iodine content. Similar comparison of different samples of thyroids from other animals—hogs, guinea pigs, etc., showed similar results, as did the use of morphine instead of acetonitrile as an indicator. Still another series of experiments was devoted to the question whether the iodine was essential to the effect of the gland, or was merely deposited in glands which were physiologically more active. A group of dogs whose thyroids were of practically the same composition and degree of activity were taken, and some of them were treated with iodine preparations for a period too brief for a stimulating effect of these on the gland to be assumed. Their thyroids, however, showed a decided increase in iodine content over those of the controls, and the physiological action was proportionately increased. In the course of the report the authors put forth some interesting speculations regarding the cause of some symptoms of myxedema and Graves' disease in the light of their work. *Bull No. 47, Hyg. Lab. P. H. & M. H. Service.*



## SURGERY.

## Conducted by

C. S. OAKMAN, M. D.

**Tuberculosis of the Cervical Lymph Nodes: Report on 275 Cases Treated by Radical Extirpation.**—Tuberculosis of the neck lymphatics is the only common form of tubercular infection which can be removed surgically without injuring an important structure, and without serious disfigurement. This is explained by the fact that the important structures are in soft parts and are easily separable, and that the infection is uniform in its development from above downward, allowing systematic and complete dissection. Cervical glandular tuberculosis is not very responsive to hygienic, climatic, and medicinal treatment.

In the study of 275 cases operated in his own practice, hospital and private, Dowd followed the individuals for years after operation, and offers the records below:

Sixteen were followed more than ten years.  
Eight were followed into the tenth year.  
Four were followed into the ninth year.  
Four were followed into the eighth year.  
Eight were followed into the seventh year.  
Fourteen were followed into the sixth year.  
Sixteen were followed into the fifth year.  
Twenty-six were followed into the fourth year.  
Twenty-eight were followed into the third year.  
Fifty-nine were followed into the second year.  
Forty-two were followed into the first year.  
Fifty not traced, or recently operated.

*Of fifty-four patients observed for periods of from five to thirteen and one-half years, fifty-three are apparently cured.* By this is meant that they are in vigorous health, with no palpable neck nodes or only such small hard ones as are believed to be hyperplastic and not tubercular. They also show no evidence of tuberculosis in any other part of the body. The author concludes that those who pass the five-year mark without recurrence need have little apprehension.

*The second group of forty-two patients, under observation between 3 and 5 years, gives thirty-seven apparent cures.* The five remaining comprise four recurrences and one death from phthisis.

*The group of eighty-seven cases followed from 1 to 3 years gives 82.8% of apparent cures, two deaths from tuberculosis, eight recurrences, one*

*persistent sinus, one syphilitic swelling, and one death from typhoid.*

*Of ninety-two patients observed less than a year, 86% gave no evidence of tuberculosis, four had recurrences, one had had operation for recurrence, one had tubercular peritonitis, one had syphilitic swelling, and there were four deaths from tuberculosis, and one from scarlet fever.*

*The only operative death in the 275 cases was due to secondary hemorrhage from the internal jugular vein.*

*Sources of infection.* In 81% of the cases the first noticeable infection was in the subparotid nodes, indicating infection from the pharynx, tonsils, or posterior part of the mouth. In most of the remainder, the submental or submaxillary nodes indicated the teeth, or front part of the mouth as the atrium.

*Operations for Recurrences.* There were forty-six operations for recurrences, of which twenty-six belonged to the severe type. Results were good. The existence of hard nodules the size of a pea or bean was often puzzling, but the author found upon excision, in eleven instances, that they were hyperplastic and not tubercular. CHARLES N. DOWD, in *Surg. Gyn. and Obst.*, Mar., 1909.

**The Intra-Abdominal Administration of Oxygen.**—BAINBRIDGE has made observations, both experimentally and clinically, on the effect of oxygen introduced into the peritoneal cavity. He concludes that it lessens shock, hemorrhage, nausea, and vomiting; tends to overcome negative intra-abdominal pressure after removal of large tumors; lessens formation of adhesions, and influences favorably certain types of tuberculous peritonitis. He also observed sufficient beneficial effect in cases of septic peritonitis to offer the suggestion that it be given further clinical trial in such cases.

Oxygen is administered by means of a sterile rubber tube inserted in the peritoneal cavity, while the wound is sutured firmly around it, leaving a purse-string suture in the peritoneum, to be tightened when tube is removed. The oxygen is passed through accessory tubing, which lies in hot water. *Annals of Surgery*, Mar., 1909.

## PATHOLOGY AND BACTERIOLOGY.

Conducted by

C. E. SIMPSON, M. D.

**Arteriosclerosis of the Uterus.**—REES gives the histories of four patients in whom uncontrollable hemorrhage from the uterus was due to sclerosed uterine arteries. There was no evidence of a general arteriosclerosis, but the pathological condition of the uterine vessels was evident at operation or easily demonstrated microscopically. Quoting OSLER on physiological arteriosclerosis that "it depends in the first place upon the quality of arterial tissue (vital rubber) the individual has inherited, and secondarily upon the amount of wear and tear to which he has subjected it," the author believes that the muscular arrangement of the uterus, the fact that it is subjected to the most radical structural changes, and the dilating and contracting of its arteries produce a condition which is most favorable for the development of a localized physiological arteriosclerosis. This in some cases changes into a pathological condition. The brittle arteries then break, resulting in a hemorrhage which is not cured by curettement nor by the exhibition of ergot. The following points are emphasized:

*First:* A diagnosis of arteriosclerosis of the uterus can only be made when it is possible to exclude every other cause of hemorrhage from the uterus, and by microscopical examination of scrapings from the uterus in which sclerosed capillaries are found, or finally from sections of such a uterus after its removal.

*Second:* Arteriosclerosis, as a definite cause of hemorrhage from the uterus, occurring in women between the ages of forty and fifty and among those who have borne children, is of greater importance than has generally been determined.

*Third:* In a fair proportion of cases the hemorrhages from the uterus are in themselves sufficient to endanger the life of a woman, and can be made to yield only to hysterectomy.

*Fourth:* With the uncertainty of diagnosis, even after examinations of a section from the cervix and scrapings from the uterus, which show no evidence of malignancy, in women between the ages of forty and fifty who have borne children, and suffer with frequently recurring hemorrhages, hysterectomy is justified. *American Journal of Obstetrics*, LVIII, 748.

**Comparison of Lesions Found Post Mortem in Cases Diagnosticated Clinically as Eclampsia and Toxemia of Pregnancy.**—For several years there have been made careful examinations of the lesions found post-mortem in pregnant

and parturient women dying of convulsions. There have been observed in the case of women dying of eclampsia hemorrhages occurring in and about the portal spaces, with coagulation of the blood constituting the hemorrhages. The livers of women dying of the condition known as "toxemia of pregnancy" presented a condition found in acute yellow atrophy with extensive degenerate processes and disintegration of the parenchyma. Early in the process the lesion consisting of degeneration, necrosis, and disintegration is found about the central vein of the lobule, whence it extends outward toward the periphery as the case advances.

In the light of these pathological findings eclampsia and toxemia of pregnancy seem to be two distinct conditions. Some, however, viewing the subject from the standpoint of chemical analysis of the products of metabolism consider the different forms of toxemia of pregnancy, including eclampsia, as very closely related if not identical conditions. They claim that both conditions result from a disturbance of metabolism, and that the disease takes a different course in different individuals and at different stages of pregnancy.

To furnish further data in the matter, WELCH presents the post-mortem findings in twelve cases on which the diagnosis had been made before death of either eclampsia or toxemia of pregnancy. The findings may be summed up as follows:

**Liver**—Six cases showed hemorrhagic changes in and about the portal spaces. Of these, two patients were called toxemic. Three cases showed necrosis in the center of the liver lobule. Clinically these had been called eclampsia. One case showed no hemorrhage, but a general swelling of the cells with autolysis. Two cases showed slight cloudy swelling of the parenchyma with no hemorrhages or necrosis.

**Kidney**—The kidney lesions are similar in all these cases, though in none is it a uniform one. The parenchyma is markedly affected throughout.

The question of etiology naturally arises in connection with these lesions. Numerous theories are offered. WELCH suggests the presence in the blood of a poison, probably an enzyme or a combination of enzymes, which causes agglutination of the red cells which then form emboli, and solution of the endothelium of the blood vessels. The origin of the poison is still unknown, though various theories have been advanced. Further study is necessary along the lines of pathological chemistry. *American Journal of Obstetrics*. Vol. lix, 1.

## PEDIATRICS.

Conducted by

R. S. ROWLAND, M. D.

**A Report Upon One Thousand Tuberculin Tests in Young Children.**—The following observations were made upon hospital patients, the majority being under two years of age. The ophthalmic test was made 615 times; the skin test of Von Pirquet was employed 217 times; Epstein's stich-reaction in thirty-eight cases; and tuberculin injections in 130 cases.

HOLT found that on the whole the results obtained by the different tests corresponded with each other and with the pathological condition as determined by other means, the only notable exception being that dying children or those who were extremely sick did not as a rule react to any of the tests.

Some failures and some unexplained reactions occurred with all of the tests; the results with any test cannot therefore be regarded as conclusive, although a positive reaction creates a very strong probability that tuberculosis is present. This is increased if the result is confirmed by other tests.

There is not much to choose between the skin and eye test. The skin reaction the writer thinks more characteristic and less likely to be doubtful than are some of the eye reactions. Some instances of doubt must occur in the temperature reactions on account of the liability of small children to slight rises of temperature from minor digestive disturbances or other causes.

In ease of application there is a decided advantage in the skin test. The scarification is a trifling thing. The patient does not require continuous observation before or after, and the reaction lasts for a considerable time. The ophthalmic cases need closer watching, the reaction is shorter and may be missed. It cannot well be used in ambulatory patients. The puncture test is slightly more of an operation and may be objected to. The fever reaction is only admissible when the child can be under very close observation.

Objectionable features are wanting in the skin test. There is no local discomfort, no general reaction, and no complications. With proper precautions HOLT believes the eye test to be quite

safe, although an intense or prolonged reaction sometimes occurs which is not pleasant to see; besides, in pathological conditions of the eye disastrous results may follow. However, the eye is too delicate and important an organ to be used for a test when any other will answer quite as well. For general use the skin test is to be advised in preference.

With the temperature reaction we may get accompanying the fever constitutional symptoms, which are quite disagreeable. There exists a possibility that a latent process may be lighted up. With mistakes in dosage which have been made, serious consequences may follow. These risks are added objections to the use of this test.

All of these tests have been too recently introduced for the final word to be spoken regarding them. No one of them is absolutely conclusive, as is the demonstration of the tubercle bacillus in the sputum, cerebro-spinal fluid or elsewhere, and one should not fall into the error of depending upon local tests to the neglect of other means of diagnosis, even though the search for the tubercle bacillus involves greater labor. In general, while the tests furnish strong probability of the existence of a tuberculous lesion, they do not enable us to distinguish between a latent and active condition. This may at times be confusing. A child may give a positive skin or eye reaction when suffering from an acute pulmonary disease, which by its course is shown to be non-tuberculous, although grave suspicion of acute pulmonary tuberculosis may have existed, and apparently be confirmed by the tuberculin test. Much needless alarm may therefore be produced by a positive reaction, which really indicates only that the child has a tuberculous focus, but does not prove that his present disease is of a tuberculous nature.

While the greatest assistance in diagnosis, the various tests are always to be taken in connection with the general symptoms and the physical signs. Taken apart from them, however, they may be very misleading. L. EMMETT HOLT, *Archives of Pediatrics*, Jan., 1909. Page 1.



## OPHTHALMOLOGY.

Conducted by

W. R. PARKER, M. D.

**Persistent Asthenopia.**—The author considers the class of patients who suffer from asthenopia which may persist through many years in spite of careful advice and treatment, in whom it is not easy to determine the essential etiological factors.

He cites the case of a boy, aged ten years, who suffered from undue sensibility to light, and blurred vision after prolonged near work. Vision right eye,  $6/12\frac{1}{2}$ ; left eye,  $6/7\frac{1}{2}$ . Fundus in both eyes dark red and fluffy. He had hyperopic astigmatism. Refraction under sulphate of hyoscyamin gave the following:

O. D.  $s + 2.00 - c + .50 \text{ ax } 105^\circ - 6/5$ .

O. S.  $s + 2.00 - c + .75 \text{ ax } 75^\circ - 6/5$ .

A slight deduction was made in the spherical and glasses given for constant wear.

Four months later all symptoms had disappeared. Three years later the eyes were healthy and comfortable.

At the age of sixteen he returned complaining of a return of old symptoms. In the meantime he had abandoned his glasses. The old fundus changes had returned, and, in addition there was inflammatory change in the choroid along the temporal border of each nerve. He rejected all glasses. Vision in each eye  $6/6$ . The anterior long, perforating ciliary vessels were full and dark, and the sclera a bluish white in the anterior segment. Under a cycloplegic his refractive error was  $+ .75 \text{ cyl. ax } 90^\circ$  in each eye. V.— $6/5$ . the 2.00 D of hyperopia has disappeared. The vision remained normal, but the eyes were weak—unduly sensitive to light, would not bear work, and remained a source of constant annoyance and trouble. The fundus oculi remained fluffy, the papillae congested, and the veins full and dark red. He was finally compelled to abandon his college work. He enjoyed comfort if no attempt was made to use the eyes. After three years a gradual improvement was noted and he returned to college, when the old symptoms returned, but in a mild degree.

Remarks.—It is interesting to inquire into the cause of this asthenopia, extending from his 16th to his 21st year of age. The most careful and elaborate study failed to discover any general disorder to account for the local impairment of functioning power.

The crux of the matter seems to rest in the distention of the sclera in the anterior segment of the globe, as indicated by the increasing refraction of the eye. In the interval in which he had abandoned the use of his glasses, between his 14th and 16th years, he had lost 2 D. of hypermetropia. The sclera in the ciliary region had become thin and bluish-white, while the long, anterior ciliary arteries and their accompanying veins, which perforate the globe at this point, were large and full, suggesting ciliary hyperemia and a relative increase of intraocular tension.

In addition to these indications of disease in the ciliary segment of the globe, attention is called to the crescent of choroiditis embracing the temporal margin of the optic nerves. Without treatment and rest from work, both eyes would doubtless have passed through the "turnstile of astigmatism" into myopic refraction, with the choroidal atrophies at the posterior pole, or, possibly, the posterior staphyloma, which characterizes the myopic ball.

In point of fact, in this patient the distention of the ball, which neutralized two diopters of hypermetropia, was effected by a stretching of the sclera in the anterior segment of the globe.

The eyes remained healthy as long as the correcting glasses were worn, but their neglect, during the critical years of his adolescence, was doubtless an important factor in causing the return of the irritation and turgescence of the uvea. The tension of the ball was raised, its nutrition impaired, and the sclera stretched, thus increasing the diameters of the globe. Any effort at near-work was therefore painful and led to further injury.—SAMUEL D. RISLEY, *The Ophthalmoscope*, March, 1909.

## OTOLOGY.

Conducted by

EMIL AMBERG, M. D.

**Scarlatinous Affections of the Ear.**—DR. F. R. NAGAR—(Basel) in a statistical study of the scarlatinous affections of the hearing organ arrives at the following conclusions (in part):

1. Only systematic investigations of a long, uninterrupted, and not picked series of scarlet fever patients can give an exact picture of the influence of scarlet fever upon the hearing organ.

2. The comparison of older with newer statistics seems to show that the number of complications is decreasing. Parallel to this we experience that the character of scarlatina has become more benign during the last years. The number of ear affections might therefore indicate the malignancy of the epidemic.

3. The investigations of more than 750 cases show that in 70% the ear was not affected; 59% were anatomically and functionally normal, whereas in 11% old pathological changes were present.

4. Undoubted scarlatinous ear affections were found in 126 cases=16.8%.

5. The influence of scarlatina on the ear among 750 patients showed the following forms:

(1) Affections of the tubes in 5% of the cases. (2) Diseased condition of the external auditory canal in 7 cases=1.1%. (3) Otitis media catarrhalis acuta non perforativa, 70 cases=9.3%. (4) Otitis media purulenta acuta perforativa, 43 cases=5.7%. (5) Otitis media purulenta acuta with mastoiditis, 6 cases=0.8%. (6) Relapse of a chronic middle ear suppuration, 1%. So that a total of 23% is reached.

6. This percentage appears high when compared with former statistics. (Weil about 10%, Gaesler 7.9%), but among our findings of scarlatinous changes in the ear are a great number which did not show essential clinical symptoms and which therefore would not be considered in statistics of manifest ear affections.

7. The acute middle ear inflammation was classified as early and late stages, according to its occurrence during or after the first week of scarlatina. 8. Generally, the early form must be regarded as a part of the exanthema, whereas for the late form a previous or co-existing fibrinous affection for the nasopharynx must be considered etiologically, especially a secondary infection emanating therefrom. 13. In 6 cases=0.8% of all children examined, or in 5% of middle ear inflammations resp. 11.2% middle ear suppurations a matoiditis occurred which led

to an operation. They were partly early, partly late forms, both with equal frequency. Only in one case death resulted which was caused, however, just as much by the primary septic character of the scarlet infection as by the otogenic complication of the thrombosis of the lateral sinus. Otherwise the prognosis was good. 14. In patients who had suffered from a scarlatinous middle ear suppuration a later control-examination (which could be extended only to a fraction of the patients) showed that in 81% of this group a permanent injury to the hearing power remained. The prognosis of an ear affected in this manner, is little favorable as to the function. About 4-5% of the 750 scarlet fever patients might have suffered a permanent injury of the hearing organ. 15. Numerically, the early forms are somewhat more prevalent; the grave forms of the ear affections of this epidemic, however, belong mostly to the late forms. 16. The histological examination of the two cases of necrotic scarlet fever otitis show, that in scarlatina similar to tuberculosis a labyrinthitis may occur also without a severance of the continuity of the labyrinthian capsule, namely by migration of the inflammation through the diseased soft parts (ringband, membrane of the round window).

17. The labyrinth affection seems to occur less through bacterial influences than by general and local lack of resistance. 18. The total destruction of the mucous membrane of the tympanic cavity in these cases furnishes an explanation for the early appearance of cholesteatoma because instead of the cylinder-epithelium a cicatrix-, or transition epithelium must be formed, over which pavement epithelium grows or which is directly transformed into a cholesteatomamatrix. 19. The appearance of fetid secretion during careful treatment of a scarlet otitis is an ominous symptom for the hearing and also for the life of the patient. It points to a far reaching necrosis of the soft parts and of the bone. 20. If no attention is paid to the observations of beginning labyrinthian irritation, which were established microscopically, there were among the 750 cases no panotitis, no sequestration of the labyrinth and no facial paralysis. This coincides with the report of Weil, according to which only one complication of this nature is observed among 750-1000 cases.—*Zeitschrift fuer Ohrenheilkunde und fuer die Krankheiten der Luftwege*, February, 1909.

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## Original Articles

### SYMPTOMS AND DIAGNOSIS OF INCIPIENT PULMONARY TUBERCULOSIS\*

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The diagnosis of a well developed case of pulmonary tuberculosis is usually an easy matter, although it is surprising how many such cases proceed to a late stage without being recognized. When one considers the prevalence of consumption and that its curability depends, in a great degree, upon early diagnosis (80 to 90% of cases being curable if diagnosed in the incipient stage), it is apparent that early diagnosis is of the greatest importance.

There are, I am sure, but few physicians who are really unable to diagnose consumption when such symptoms as cough, expectoration, fever, night sweats, etc., are present. Even such cases, however, from carelessness or otherwise are often unrecognized for long periods of time, being called bronchitis, chronic catarrh, dyspepsia, malaria, etc. But advanced cases are not the ones to which I invite your attention today. We are to consider *incipient* pulmonary tuberculosis, which is, one might say, an en-

tirely different disease; it certainly has an entirely different clinical picture from the malady we were taught to call consumption in books and colleges not many years ago. And if you have in your minds the symptoms and physical signs of advanced or even moderately advanced cases only you will utterly fail to recognize the cases of incipient disease we are about to consider.

Too many physicians depend for their diagnosis upon finding tubercle bacilli in the sputum. For this reason a large number of incipient cases are overlooked. Dr. Trudeau has told me that 25% of the patients who enter the Adirondack Sanitarium have no tubercle bacilli in their sputum. Of 6,000 patients treated in the different Sanatoria of Germany in 1902, 2,000 or one-third were diagnosed without the aid of the microscope, before the open stage of the disease was reached. As a rule I believe the presence of tubercle bacilli in the sputum does not represent the initial stage of pulmonary tuberculosis. The primary result of infection of pulmonary tissue with

\*Read in part before the Forty-third Annual Meeting of the Michigan State Medical Society, Manistee, June, 1908.



tubercle bacilli is cellular degeneration and necrosis. In most cases the organism responds to the initial injury by cell proliferation and the formation of tubercles. If this newly formed granulation tissue is sufficiently strong, encapsulation and arrest of the disease takes place; otherwise caseation follows. The tubercles soften and liquefy and in time break through the thin membrane surrounding them into the bronchial tubes. Not until this open stage of the disease is reached do we find tubercle bacilli in the sputum, and from that moment the door is open to mixed infections and their resultant evils. If it is possible, therefore, to make a diagnosis during the closed stage, the prognosis is much better and the patient is not in any way a menace to the community.

If called upon to attend a case of inflammation in some other part of the body, what would be thought of a surgeon who was unable to make a diagnosis until an abscess had ruptured and its purulent contents escaped? But that is the attitude many physicians assume when confronted with a case of pulmonary tuberculosis. No matter what the symptoms or physical signs may be, they are unwilling to diagnose consumption until tubercle bacilli are demonstrated in the sputum. I now examine the sputum only in cases of doubt. In advanced cases the symptoms and physical signs are usually such as to make a diagnosis certain without the sputum examination. In incipient cases the absence of tubercle bacilli renders the diagnosis none the less certain.

The definition of incipency, I believe, is not as well known as it ought to be. This is shown by the fact that of one hundred and three cases recommended by the state examiners for admission to the Michigan State Sanatorium as incipients, less than one-third were found to be in the incipient stage on entering the institution. As defined by the com-

mittee of the National Association for the Study and Prevention of Tuberculosis, an incipient case is one with a slight initial lesion in the form of infiltration limited to the apex or a small part of one lobe; no tuberculous complications; slight or no constitutional symptoms (particularly including gastric or intestinal disturbances or rapid loss of weight); slight or no elevation of temperature or acceleration of pulse at any time during the twenty-four hours, especially after rest; expectoration usually small in amount or absent. The recognition of these cases often necessitates painstaking and repeated examinations. We may be unable to find any positive physical signs whatever at our first examination and it is sometimes a matter of great surprise to see what slight physical signs are to be found even with a positive sputum. There may be no symptoms whatever, except loss of weight, this being in my experience the first symptom present in the largest number of cases. Twice, however, in the past month young girls have been brought to me, one aged eighteen years and the other nineteen years, with well marked incipient disease in the apex of one lung, both of whom weighed several pounds more than ever before in their lives. The next most frequent symptom is probably an increased pulse rate (Lawson Brown considers this of less importance than the temperature), and a combination of this with loss of weight should always make one suspicious of incipient tuberculosis. Not until the patient has been gone over several times with negative results and a tuberculin test has failed to react, should the disease be excluded. Sometimes nothing but loss of weight will be discovered. Such patients are sometimes said to be in a pretubercular stage. This term, I think, should not be used at all. It has been generally applied to cases of incipient disease which have presented no

outward manifestations.

One has to be on his guard constantly or these cases of incipient disease will escape notice. I have several times had patients come to me occasionally for two or three months with loss of appetite or general debility and some loss in weight before finding them to be cases of incipient tuberculosis. I now weigh every patient who comes to my office and in a good many cases loss of weight alone or in combination with a rapid pulse or perhaps a rise of a degree of temperature has given me the first indication of the true condition. About the only symptom observable may be a slight rise of temperature sometime in the 24 hours. In order to detect it a two hourly observation should be taken extending over several days. The highest temperature will usually be found between five and nine o'clock p. m., but it is at times highest in the morning between eight and ten o'clock, or at noon. This elevation may last but an hour or two, so that if the temperature is taken only two or three times a day it may be entirely overlooked. If there is a daily rise of temperature of from one-half to one degree that cannot be explained in some other way, especially if there is also present any loss of weight or increased pulse rate or anemia, it should go a long way in confirming our suspicion of incipient tuberculosis. If carefully followed up, a rise of temperature at some time of the day will be found I believe in almost all incipient cases, and the thermometer is an indispensable agent in arriving at a correct diagnosis.

Repeated examinations of the chest may have to be made before distinct physical signs are detected. In organic heart lesions we know that a murmur may be present one day and absent the next, and that it is much influenced by the position of the patient and the amount of pressure put upon the stetho-

scope. I have seen Osler search four days in succession before finding a murmur of mitral stenosis. In the same way the physical signs of incipient lung disease may vary from day to day and satisfactory evidence may be found only after many and prolonged examinations.

One of the earliest physical signs is a change from the continuous to the interrupted rhythm. Inspiration loses its breezy character and becomes roughened and shorter in duration with perhaps an interrupted, jerky, or cog-wheel character, while expiration is prolonged and higher in pitch. This roughening and slight alteration in the character of the respiratory murmur, produced by the air passing over slightly uneven surfaces in the bronchial tubes, is probably the earliest physical sign of tuberculous involvement of the air passages, especially when found immediately above or below the clavicle. Loomis says that the first physical signs may be found by making the patient place his hand on the opposite shoulder. The stethoscope is then placed over the posterior portion of the lung uncovered by the scapula. Just above and external to where the bronchial tubes are given off there will be heard prolonged tubular breathing and fine crepitation on coughing.

Next in importance to a roughened or cog-wheel respiratory murmur or perhaps even more important is the finding of fine crepitant rales on inspiration. These rales are by no means constant. They may be heard one day and not the next, and are often present on damp and rainy days while absent in dry weather. They are most frequently heard in front, just above or below the clavicle or in the suprascapular region. In going over the chests of patients in whom I have had no reason to suspect tuberculosis, I have sometimes found fine crepitant rales at the base which have long puzzled me, and I was glad to hear Janeway of New York say some time ago that one may

hear fine crepitant rales when they do not mean anything. He called them auditory hallucinations. I suppose they are due to a slight increase in the normal secretion of mucus. But when such rales are unilateral and constant, and associated with a slight rise in temperature or a progressive loss of weight or an increase in pulse rate, they are indicative, in a great majority of cases, of incipient pulmonary tuberculosis.

Cough may or may not be present, and it sometimes requires repeated questions on different days to secure an admission from a patient that he coughs. Recently two brothers came to me. One had been treated by a well-known colleague, with a diagnosis of probable pulmonary tuberculosis. He had no expectoration and but little cough. He had lost ten pounds in weight, but had no increase in temperature or pulse rate. I gave him a hypodermic tuberculin test which confirmed the diagnosis. The other brother consulted me for nasal and pharyngeal catarrh. He weighed within four pounds of his maximum, had no fever or increase of pulse rate and always denied having a cough. After treating him daily or every other day for a month, during which time he said his catarrhal trouble was steadily improving, something or other induced me to examine his chest, whereupon I found disease in the apex of both lungs. I then secured from him an admission that he coughed a little every morning on arising, which he attributed to his naso-pharyngeal catarrh. His sputum was loaded with tubercle bacilli.

Of the early symptoms, hemoptysis, when present, is one of the most important. In the great majority of cases it is due to pulmonary tuberculosis. It may also be due to mitral stenosis or tricuspid regurgitation. I think all cases of hemoptysis should be considered tuberculous in nature until they are

proven to be otherwise. The following case is interesting in this connection:

Mr. S., hardware merchant, Manton, Mich., aged 43, consulted me Oct. 10th, '09. His partner died of consumption five years ago; highest weight 148 pounds, 15 years ago; usual weight for past six years, 135 pounds; today 126 pounds; five years ago had rheumatism throughout the fall and winter; three years ago was out of his store one year on account of poor health; has been running down for five years. In June, '08, he had pleurisy for a week; has coughed more since then; no sputum; had a hemorrhage from the lungs Aug. 20th, '08. He had no fever and his pulse was but slightly accelerated. Physical examination of the lungs revealed nothing conclusive. A faint mitral systolic murmur was found, best heard at the end of expiration. I gave him two tuberculin eye tests, one cutaneous test and three hypodermic injections of Koch's old tuberculin of two, five and ten milligrams respectively, all with negative results. I was somewhat suspicious that my tuberculin was inactive and let him return home, telling him that while I was of the impression he had tuberculosis, I could not prove it then. I prescribed rest, fresh air, plenty of food and tonics. During the next month he had four more hemorrhages. Dec. 17th, he returned weighing 133. A cutaneous test with tuberculin, which I knew to be active, was negative. After repeated examinations I came to the conclusion that the mitral systolic murmur was of organic origin and the cause of the hemorrhages.

According to Brown 90% of cases of hemoptysis are followed sooner or later by evidences of pulmonary tuberculosis, and Cornet says that "All in all one does not err in considering actual pulmonary hemorrhage to be of tuberculous nature, although hemorrhages do occur in certain other diseases." The first symptom to appear in several of my cases was hemoptysis. One of these weighed more at the time than ever before in her life, and it was over a year before any other symptoms appeared. Twice in the past year patients have come to me with a diagnosis of pulmonary tuberculosis in whom I have found the lesion to be mitral stenosis, both of whom had



the precordial thrill, the presystolic shock and the presystolic murmur pathognomonic of stenosis of the mitral orifice.

Percussion of the chest is frequently negative in the incipient stage. This is not strange when we consider the pathology of the disease. The earliest deposit in the lungs usually occurs in the form of miliary tubercles in the mucous membrane of the smallest bronchi. Although these may early give rise to a few auscultatory signs, such as a change in the quality of the vesicular murmur or a few fine rales at the apex or in some part of the upper lobe, best heard during inspiration following a cough, these spots of consolidation must be at least several centimeters in area to produce much change in the percussion note, and considerable experience is required to detect these slight changes found in incipient disease.

Pryor has called attention to the fact that one of the most reliable signs of consolidation is obtained by observing the transmitted whisper produced by the patient whispering the words, "ninety-nine." "The variation in pitch and the prolongation of sound are far more easily detected than when the speaking voice is employed." He regards this sign as one of the greatest importance.

While Kyritz asserts that internal medicine is just beginning to appreciate the importance of and to utilize Roentgen research, especially in the diagnosis of incipient tuberculous processes in the bronchial glands and apices, *practically* the X-ray does not seem to be of much value in the diagnosis of *incipient* pulmonary tuberculosis excepting in the hands of experts, and the number of these with the necessary laboratory, clinical and postmortem experience is limited. Even men with large experience differ in their interpretations of skiagraphic findings. In the hands of an ordinary practitioner conclusions

drawn from the use of the X-ray are misleading and of no value whatever. Dr. Paul Krause of Jena, stated in a paper presented to the recent International Congress on Tuberculosis at Washington that infiltration at the apices sufficiently extensive to be demonstrated by percussion produces a more or less deep shadow, but that simple catarrhal processes in the early stage cannot be demonstrated either by the fluoroscope or by taking an X-ray photograph. As in 95% of cases of incipient disease in adults the first physical signs appear at the apex, due to an apical catarrh, the X-ray would not seem to be of much value, even in the hands of an expert, in the class of cases we are considering. Krause concludes that in the main X-ray diagnosis merely confirms or completes the clinical findings and is limited to the detection of differences in density in the lung. Williams of Boston, says that the X-ray examination should not be used to take the place of auscultation, but only after thorough classical examination of the chest has been made. He believes the value of the X-ray to be very great in the early diagnosis of tuberculosis, especially in determining the condition of the central portions of the lungs; that this method of examination is not infallible, but is corroborative, more accurate and sometimes earlier than the classical method.

Bonney of Denver, has resorted to radiography in a large number of clearly defined cases of tuberculosis in order to compare the clinical and skiagraphic findings in cases of small circumscribed effusions, pulmonary cavities and suspected mediastinal glands. "As a rule," he says, "the information secured has been strikingly conclusive. As a result of this inquiry, however, previous convictions as to the slight practical value of the X-ray in the diagnosis of very incipient cases without well defined structural lesions have been substantially

confirmed." Occasionally Bonney found the X-ray picture simulated certain pathologic conditions which did not exist, as aortic aneurism and pleural effusion, and in several cases of slight but undoubted pulmonary infection the rays failed to give any shadow whatever. In advanced cases, however, all observers agree that by means of radiography wonderfully accurate and valuable information may be obtained as to the extent and nature of the structural changes.

Dock is of the opinion that in many cases of incipient tuberculosis, where a clinical diagnosis could be made with all the assurance possible short of finding bacilli or getting a reaction, the X-rays have been much less convincing than the physical signs. "Undoubtedly," he says, "in some incipient cases, as in some advanced cases, X-rays will disclose things not known before; but it seems to me it is much better to try to make diagnoses in other ways, and especially better for physicians to use all the methods they can, instead of sending patients off to X-ray operators and depending on their results."

Much work has been done in recent years to determine the exact diagnostic value of the tuberculin reactions, and tuberculin is now regarded as one of the most useful agents in the diagnosing of doubtful cases of tuberculosis. A great many objections have been made in the past to the subcutaneous use of tuberculin for diagnostic purposes, but so far little proof has been brought forward to show that when properly administered there are any real objections to its use. A positive reaction probably always indicates tuberculosis in some part of the body. There are only one or two instances on record, (Lawrason Brown) in which after reaction tuberculosis was not found during a carefully made autopsy, and it is possible in these cases some minute foci of disease escaped de-

tection. The recent work of Warthin on the liver showing that we may have "tuberculosis without tubercles," and that the primary lesions of cell degeneration and necrosis may exist without secondary lesions of tubercle formation indicates that tuberculosis may easily escape detection at an autopsy as ordinarily conducted. Failure to react to tuberculin does not always prove the absence of tuberculosis, for in advanced cases reaction frequently does not occur. In all early cases, however, ten milligrams of tuberculin administered hypodermically will produce a reaction consisting of headache, backache and pains in the bones and muscles similar to those experienced in influenza, and fever. The most characteristic symptoms are the backache and elevation of temperature which usually appear within 12 to 24 hours after the injection; occasionally the reaction is delayed until the second 24 hours. The temperature rises from one to three degrees or more, occasionally reaching 103° to 104° F. All persons who react to tuberculin do not, of course, need treatment. It is only when symptoms or signs of disease are present that treatment should be insisted upon.

May 15th, 1907, Wolff-Eisner of Berlin, and June 16th, Calmette of Lille, France, brought to the notice of the profession a method of diagnosing tuberculosis by the instillation into the eye of a one-half to one percent solution of tuberculin, whereby hyperemia of the conjunctiva is produced in infected individuals. It was stated that the method was absolutely safe, no constitutional disturbances following the instillation, and only slight ocular discomfort and lachrymation. A number of writers have reported cases in which this test was negative whose sputum contained tubercle bacilli, and in far advanced and acute febrile cases a positive reaction is often absent. Wolff-Eisner reported 85%

of positive reactions in active tuberculosis in the first stage (Physical signs at the apex; unilateral or bilateral infiltration; fever absent or slight), and 58% of reactions in the second stage. In tuberculosis of the third stage the occurrence of reaction was the exception in Wolff-Eisner's experience, occurring in but 23% of his cases. A. Fränkel obtained positive reactions in 45% of his cases in the third stage. It is therefore clear that a negative result after the use of the conjunctival test is not necessarily proof that tuberculosis is not present. On the other hand all observers who have used this test in a large series of cases (and these statements apply also to the hypodermic and cutaneous tests) report positive reactions in a number of apparently healthy persons. Baldwin found that practically all tuberculous cases, whether recent or remote, reacted. Of nine cases of healed tuberculosis, of from one to seventeen years' standing, eight reacted. It is known that at least 75% of adults have at some time during their lives been infected with tuberculosis and it is not yet definitely known to what extent the conjunctival and cutaneous tests will react in latent or long healed cases.

My own experience with the ophthalmic test in 40 cases has induced me to believe that it is much less reliable in the diagnosis of incipient disease than the hypodermic test. Such instances as the following have led me to this conclusion:

**Case 1**—Sarah V., aged 32. Feb., '05, she was ill with grip several weeks and did not entirely regain her former health; usual weight 130 to 132 pounds; pulse 80 to 90; no fever, no expectoration; but little cough. Physical signs consisted of fine rales at the apex and base of left lung. Four milligrams of Koch's old tuberculin hypodermically were followed by headache, backache, and a temperature of 101°. Jan. 9th, '08, she weighed 129 pounds, still coughing a little; eye test negative.

**Case 2**—Two sisters came to me Jan. 2, 1907, from the Sacred Heart Academy; both had coughed several months and distinct physical signs were present of incipient tuberculosis. The sputum of one contained tubercle bacilli; that of the other did not. The ocular test was used in both cases. The one with positive sputum reacted and the other did not. I then gave the latter two milligrams of tuberculin hypodermically, which was followed by a most positive reaction. Tubercle bacilli were found in both patients in an Eastern Sanitarium.

**Case 3**—Mr. C. N. W., aged 64; been coughing more or less for a year; general health fair; pulse 80 to 95; but little fever. Physical signs were limited to the lower lobe of one lung; I could not satisfy myself that the apex was affected. Sputum was fairly copious and fifteen specimens were examined with negative results. One of my friends has told me of a case in whose sputum tubercle bacilli were not found until the sixtieth specimen was examined. Two eye tests were used with negative results, but three hypodermic injections of tuberculin of 2, 5, and 10 milligrams respectively were positive in each instance. I submitted a complete history of the case to Lawrason Brown, who said the case was undoubtedly one of tuberculosis, although it was unusual in adults to have the physical signs make their first appearance at the base of the lung.

**Case 4**—Mr. G. W. S. was taken ill with what was called influenza. When I saw him March 7, 1908, he had lost 24½ pounds in weight. He had cough, expectoration, and fine rales at the base of the left lung. The eye test was used with negative results. Two milligrams of tuberculin were followed by a temperature of 103°, headache, and the appearance of tubercle bacilli in the sputum.

**Case 5**—Mrs. Wm. M., aged 45, came to see me on account of loss of weight and appetite. For a year she had lived with a daughter-in-law who had had pulmonary tuberculosis for three years. She had no acceleration of pulse, no fever, no cough, and no expectoration. Physical examination, however, disclosed well marked incipient disease in the left apex and two milligrams of tuberculin hypodermically produced positive results. The eye test was used with negative results.

In three other cases, one of tuberculosis of the hip, one of tuberculosis of the glands of the neck,



and one of Potts disease complicated with pulmonary tuberculosis, the eye test gave no reaction, whereas the hypodermic use of tuberculin gave results in each case.

So many instances have been reported during the last few months of violent reaction following the ocular test, whereby the eye has been seriously and permanently damaged, and the cutaneous test of von Pirquet of Vienna, is so easy of application and so absolutely devoid of danger, that I have used the eye test but seldom in the last six months. The skin test is especially useful in children in whom the application of the ocular test is sometimes quite difficult. Even Calmette says that in children under one year of age the cutaneous test is to be preferred as the more convenient and inoffensive procedure. Wolff-Eisner states that it is *far more sensitive than the eye test and that a positive reaction after its use is conclusive evidence of tuberculous infection.*

Von Pirquet reported at the Washington Congress that of 1,600 children who were given the cutaneous test in Vienna, 200 died and were carefully examined post-mortem; of 68 cases which gave a positive reaction 66 showed tubercles on macroscopic examination; only two showed no gross lesions. Concerning these we must remember, as Wolff-Eisner says, "One must not conclude as to the non-existence of tuberculosis merely on the grounds of the signs found at autopsy. Organs which seem to be healthy macroscopically may be found to contain tubercle bacilli on microscopical investigation, and even organs appearing microscopically normal may be found to contain bacilli in the animal experiment." The cutaneous test was negative in several cases in which it was made but a few days before death and in a few cases wherein the infection was slight and inactive and in which a reaction often follows a second skin test or the subcutaneous use of tuberculin.

Heiman of New York, reports a negative result in eight out of ten cases of tuberculous meningitis in which the tests were made during the terminal stage of the disease. Louis Fischer of New York, has found the skin test positive in tuberculous meningitis, coxitis, and osteomyelitis.

Recent investigations have shown tuberculosis to be much more prevalent among infants and children than it was formerly supposed to be, especially in those of tuberculous parents. In an examination of 322 children of tuberculous parents, Sachs of Chicago, found positive evidence of tuberculosis in 29%. He concluded that tuberculosis in the adult is in many cases the final result of infection in childhood. In a study of 900 children at the Boston Consumptives' Hospital, ranging in ages from a few months to 15 years, a majority of whom had been exposed to tuberculosis in their homes, Drs. Floyd and Bowditch, by means of repeated physical and sputum examinations, tuberculin tests and X-ray examinations, found that about 40% showed definite pulmonary lesions and about 26% more gave evidence of tuberculosis through signs or symptoms. In a large number of cases the clinical symptoms aided in making a diagnosis, but a good many were entirely without any complaints. In a recent paper Drs. Miller and Woodruff of New York, state that of 150 children of tuberculous parents examined by them, 51% were found to be positively tuberculous, 29% not tuberculous, and 20% doubtful. They state that the factors in arriving at a diagnosis are:

1. Malnutrition.
2. Pulmonary symptoms and physical signs.
3. Enlarged cervical lymph-nodes.
4. Hypertrophied tonsils and adenoids.
5. Tuberculin tests.
6. Sputum examinations.

"Of these the pulmonary symptoms and physical signs and the tuberculin tests appear to be the most valuable and constant. The physical signs in children under ten years are not those of the typical apical lesion usually found in adults, but are often signs of a persistent localized bronchitis, usually in the lower anterior chest."

Inasmuch as newly-born infants never react to tuberculin and it is impossible in the great majority of cases to make an early diagnosis of pulmonary tuberculosis in infants from an examination of the chest, any diagnostic method which enables us not only to make a diagnosis with certainty, but also to determine definitely the time of infection, which can be done by making periodic cutaneous tests in all exposed children, cannot fail to be of immense value. Le Fetra of New York, says, "Some cases in infants give no signs, many have simply generalized rales, while others have signs of broncho or lobar pneumonia; very few give characteristic signs such as those of consolidation. If careful sputum examinations and the skin test are both negative, one can feel safe in ruling out tuberculosis, no matter what the signs in the chest." We must remember, however, that in children in a good many cases, perhaps in a great majority of them, involvement of the lungs is secondary to tuberculous disease in the tracheo-bronchial glands, and many authorities believe that even in adults the primary focus of infection is found in the lymphatic glands. It is unquestionably a fact that in tuberculosis in children the bronchial glands are regularly found to be tuberculous on post-mortem. Cornet reports these glands tuberculous in 286 of 302 autopsies, and Holt reports 119 post-mortems in every one of which the bronchial glands were found to be tuberculous. Walstein of New York, in 185 autopsies on tuberculous children found the lungs alone in-

involved in four and the bronchial glands alone in one; in thirteen the lungs and bronchial glands only were involved. She states that "although the lungs are involved more frequently than any other organ, this proves their marked predisposition to tuberculosis rather than their primary infection." Woods Hutchinson in a recent paper, says that the data so far collected appear to point toward the following conclusions as probable: 1. That the lung is the most frequent site of tuberculous involvement in children, as in adults. 2. That whatever the port of entry, the lung suffers most severely and frequently. 3. That it would appear probable that even the glandular forms of tuberculosis do not represent an earlier or milder form of infection but are secondary to a pulmonary involvement.

The trend of opinion, however, at the present time, seems to be towards the view that in both adults and children the bronchial glands are infected first. Anatomically this is the correct incidence. In most other infections gaining entrance to the body through the intestines or respiratory tract the glands act as filters and become infected first; secondary infections follow at longer or shorter intervals.

As long ago as 1897 Petruschy in the *Deutsche medicinische Wochenschrift*, stated that the first stage of tuberculosis was always a glandular infection, the second stage was that of closed tuberculosis of the lungs, and the third stage was the open one. We at any rate now definitely know that in children the mediastinal glands are often affected long before there are any appreciable pulmonary symptoms or physical signs. We also know that the diagnosis of those enlarged glands is often exceedingly difficult, especially in the incipient stage of the disease. The symptoms produced by them depend somewhat upon whether they are located in the anterior mediastinal space, beneath the

sternum and costal cartilages, around the primary bronchi and in the peribronchial tissue at the hilus of the lung, or in the posterior mediastinal space, anterior to the vertebrae about the aorta and esophagus. In many cases there are no symptoms whatever. When large enough to produce pressure, they may give rise to dysphagia, dyspnea, peculiar paroxysms of coughing often ending in vomiting, distension of the veins of the neck and upper chest, etc. On physical examination in some cases there will be found dullness and bronchial breathing over the upper part of the sternum, unilateral alterations in the breath sounds due to pressure on the bronchi, or a venous hum over the manubrium when the child's head is bent backwards. In other cases percussion over the spine may give valuable information. Normally over the seventh cervical spine there is flatness; from the first to the fifth dorsal spine there is increasing resonance; and good resonance from the sixth to the eleventh. In enlarged bronchial glands flatness may be obtained from the second to the seventh dorsal vertebrae. In some cases a physical examination may be entirely negative. Inasmuch as well-developed tuberculosis in infants and young children is almost certain to prove fatal, the importance of the cutaneous test in enabling us to recognize these cases almost at the very moment of infection, long before symptoms or physical signs are present, is apparent. Every reacting child should be examined for hypertrophied tonsils, adenoids, and enlarged cervical glands, as well as for thoracic and abdominal lesions.

The success of modern methods of treating tuberculosis depends upon its early recognition, and while early diagnosis is exceedingly important in adults it is doubly so in infants and children.

One of the most interesting of the fifty cases in which I have used the skin test is the following:

Baby B., aged six months, weight  $17\frac{1}{2}$  lbs., never been ill since birth. Her father has had pulmonary tuberculosis for one and a half years and for the past month the mother has noticed that the baby coughed a little at rare intervals, although apparently in perfect health. Physical examination of the lungs was negative, and a two hourly record of the rectal temperature for three days disclosed no fever. A skin test was given with positive results. The baby was at once put out of doors with her father for nine hours a day. When the thermometer was below 20 F., she was kept in a room with two large open windows during the day; at night she slept in an open room, spending in this way 21 of the 24 hours in fresh air. One month later she weighed  $18\frac{1}{2}$  pounds, had two teeth, appetite good, no fever, some wheezing or slight dyspnea on exertion, but respiration was entirely free when she was quiet. On percussion dullness was found over the manubrium extending a little to the left of the sternum, and also over the fifth, sixth and seventh dorsal spines. On auscultation bronchial breathing could be heard over the upper part of the sternum and a faint venous hum over the manubrium when the baby's head was bent backwards. Owing to the early diagnosis, a favorable prognosis was given.

The following case also illustrates the great value of Von Pirquet's test:

Mr. J. D., aged 19, came to me Nov. 26th, 1908, was well until the middle of August, since which time he has tired easily and felt run down; appetite good; sleeps well; no cough or expectoration and no increase of pulse rate, but an occasional afternoon temperature of 99 F. Last winter weighed 110, today 117, the most he has ever weighed. The boy was convinced he was not well and had been under a physician's care for two months. I gave him a cutaneous test with a twenty-five per cent solution of tuberculin and got a positive reaction, but was unable to detect any physical signs of pulmonary disease until a month later, when I found numerous fine crackling rales in the apex of the right lung, and in the interscapular region. I gave him directions as to his eating, sleeping, etc., and permitted him to continue working. Jan. 30th, he weighed 125 lbs., and showed evidence of rapid improvement.

Another case in which the negative results of a cutaneous test proved of considerable use to me was the following: M. S., aged seven. For two or three weeks she had complained of oc-



casional pains in her right knee which were aggravated by walking. The knee was somewhat swollen and the capsule distended. I applied a plaster of Paris cast which, however, was worn but a day or two owing to the inconvenience it caused the child. A couple of days later while I was out of the city the parents were persuaded to take her to a surgeon who diagnosed tuberculosis of the hip and advised an immediate operation. On my return to the city I gave the child a cutaneous test with negative results and in two weeks she was well and has remained so since.

In closing I wish to emphasize the fact that fine crackling rales often constitute the only physical signs to be found in incipient cases of pulmonary tuberculosis and if persistently localized in one lung may be considered almost pathognomonic of this disease. These rales are usually best heard at the end of inspiration, especially if preceded by a cough. They often do not appear on quiet respiration or even on moderately deep breathing; but a deep expiration followed by a slight cough will render them audible. They are most frequently heard in the upper lobe above or below the clavicle, or above the scapula, or along the inner border of the scapula when the patient's hand is placed upon the opposite shoulder. Physical signs alone, however, do not always enable us to differentiate between an acute, active, lesion and an inactive or long healed one. Identically the same sounds may occasionally be heard over a lung that has not been the seat of active disease for 20 years or more as over one with a recent lesion. This differentiation must be made in large part from the history, pulse, temperature and other symptoms.

It must be borne in mind that even if a skin test is positive, it does not signify that the symptoms present in any given case are necessarily due to tuberculosis. I was recently called to see a woman 30 years of age who had been ill three months with irregular fever, sweating, occasional delirium and gradual fail-

ure of flesh and strength. A skin test had been given with positive results, and three physicians had diagnosed acute tuberculosis. Careful inquiry into her past history elicited the fact that when 14 years of age she had a period of ill health attended with more or less cough extending over a year. Five years later she had a severe attack of inflammatory rheumatism and had been troubled since with more or less shortness of breath on exertion. Physical examination of the lungs was negative, but a loud systolic murmur was heard over the mitral area which was conducted to the left and plainly heard under the angle of the scapula. The apex beat was found in the sixth interspace, four and one-half inches from the median line. The clinical picture of malignant endocarditis was made complete by finding a petechial rash resembling that of cerebrospinal fever scattered over the trunk and lower extremities.

The *Handbuch der Technik und Methodik der Immunitäts-forschung*, volume 1, chapter, 35, 1908, contains an article by von Pirquet on "Kutane and Konjunctival Tuberculin Reaction" in which he arrives at some very interesting conclusions concerning the cutaneous test. He believes there is a close relation between the activity of the lesion, the intensity of the reaction and the time of its appearance; i. e., if a reaction comes on early and the inflammatory character (redness, swelling, and papule formation) is marked, it indicates an active lesion. A negative reaction signifies in general that the organism is not already infected. But a negative reaction may sometimes result from lack of sensitiveness of the individual (as in the final stages of the disease), from the use of weak doses of tuberculin, or from other conditions not yet understood. Some cases react to the hypodermic use of tuberculin that do not respond to the ophthalmic or cutaneous tests, such as

the eight cases already referred to by the writer. Von Pirquet explains this by the fact that in the febrile test increasing doses of tuberculin can be given, but in the cutaneous test a stronger solution than 100 per cent cannot be obtained. Most cases react with a 10 per cent solution or stronger, but certain persons react only to undiluted tuberculin. Von Pirquet describes five different reactions following the application of tuberculin to the skin in infected individuals. First—the traumatic reaction, consisting of a slight redness following the inoculation in about an hour and a half and disappearing as a rule after an hour or two. Second—the negative reaction. Third—the positive reaction, which appears about three hours after the disappearance of the traumatic reaction, and which does not appear about the central or control scarification. The redness increases until its maximum is reached usually in from 12 to 24 hours. The exudation about the scarified area can be detected by touch better than by sight. Fourth—the torpid reaction, coming on after 24 hours, and usually seen in clinically unsuspected cases in young children or those of more advanced age. Fifth—The Cachectic reaction in which

the papules are very pale, usually seen in scrofulous children.

Wolff-Eisner believes the cutaneous test to be of great prognostic value in that a positive reaction indicates the existence of a capacity to react, whereas unresponsiveness to the reaction indicates a lack of this capacity. According to his observation the absence of the reactive capacity is in all cases to be regarded as an ominous sign, whilst a positive reaction, on the other hand, merely indicates that the body is capable of fighting a battle.

The most improved method of making the Von Pirquet test at the present time is to take various strengths of tuberculin ranging from 5% to 100% or pure tuberculin, make at least six to eight scarifications on the arm and apply a different strength to each scarification. It is believed by some that the amount of reaction occurring from the various strengths can be interpreted as an indication of the degree of progress of the disease. This in the mind of the writer is still unproved. At present Von Pirquet seems to use either a 100% tuberculin alone, or a series of 25%, 50% and 100% Koch's old tuberculin.

## DISCUSSION.

**H. J. Hartz, Detroit.** The most effective weapon against the perpetuation of tuberculosis is the early recognition of the disease at a time when a cure may be effected and before the lungs have broken down and expectoration has begun. At this time there has been no opportunity for the spread of the disease, and the home, shop, and environment of the patient is free from the bacillus of tuberculosis. In short, the diagnosis must be made while the closed or quiescent form of pulmonary tuberculosis is present, before it is converted into the open or active form with expectoration. Obviously this can not be done by Federal, State or Municipal legislation alone, but becomes the work of the medical profession. With the reasonable co-operation of the public this could be accomplished. It is estimated that a

mortality rate of a given community is only one-tenth of the real number affected by consumption, hence for every death there may be found nine subjects who are afflicted, and among that number the larger proportion represent incipient cases. The message from Dr. Johnston on Early Diagnosis of Pulmonary Tuberculosis is therefore timely, and deserves the closest scrutiny. It is admirably designed to help us distinguish between the incipient and moderately advanced cases of consumption. It must be admitted that it is difficult to always make an early diagnosis, since tuberculosis is often one of the concealed infections, and the primary colonization of the germs is so insidious as not to attract the attention of patient or physician until necrosis has caused some destruction of lung tissue. This condition

causes a combination of symptoms, such as rise in pulse rate and temperature, hypersecretion of mucus, slight cough, loss of appetite and malaise. Many individuals undergo infection with tuberculosis while attending to their routine duties,—the slight indisposition is not heeded and the process heals without medical attention, to become what is known as quiescent or latent tuberculosis of the lymphatic glands, or of the lungs. Repeated attacks of infections with the bacilli of tuberculosis, or those of LaGrippe, Pneumonia or Measles in children convert the closed form of tuberculosis into that of the open form, with expectoration. Usually then, medical aid is sought when the process is found to be moderately advanced rather than incipient. The sputum shows that the organisms of sepsis have joined those of tuberculosis, constituting what is known as mixed infection. The incipient cases should be sought rather than waited for by physicians. Many patients would be grateful to the physician who could make an early diagnosis, and promptly advise a change of occupation or institute a hygienic and dietetic regime that would often prevent the further progress of the disease. Many of the incipient cases may be found among the inmates of that home in which a tuberculosis subject has lived who suffered from the open form of the disease; these latent cases present no special evidence of tuberculosis in their appearance, but upon careful examination of the apices by mild percussion, relative dullness is noted. The inspiratory sounds differ when both sides of the chest are compared, and instead of the normal soft vesicular murmur, the harsh broncho-vesicular note is heard and sometimes the vesicular murmur is very much diminished and shortened. Children living in homes with tuberculosis subjects are nearly always infected, because of greater permeability of their membranes and the intimate association forced upon them.

Dr. Johnston very properly emphasized the lymphatic type of tuberculosis in the child. It is an axiom with pathologists that "early tuberculosis in the child is found in the bronchial glands." This is also true of many cases of tuberculosis of the adult, because irrespective of the route of invasion, whether by way of the lungs with air or through the intestinal tract with food, the bacilli are taken up by the lymph channels and transported to the glands, where they are held, to be made harmless by phagocytosis or they may gain access to the lungs,—usually the apices by way of the blood stream which always

passes through the lungs before reaching other parts. Primarily tuberculosis is nearly always a lymphatic process invading the lungs secondarily. The diagnosis of lymphatic tuberculosis is made by finding the hypertrophy of the glands. In the mediastinal space the hypertrophy may by pressure upon the sympathetic nerves induce unequal dilatation of the pupil and gastric disturbance. In addition the physical signs on percussion and auscultation over the region, then the reaction to the cutaneous and ocular test as well as symptoms of fever and malaise.

Happily we are now in possession of two specific methods of diagnosis which are nearly accurate and harmless when precautions are observed in their application. I refer to the conjunctival reaction of Wolff-Eisner and Calmette, suitable for adults, and the cutaneous test by V. Pirquet for children. The subcutaneous injection of tuberculin for diagnostic purpose is not free from danger as it may soften the capsule of the tubercle, thereby causing spreading of the disease, besides it has the disadvantage of reacting in the presence of latent as well as active tuberculosis. In some patients a reaction may be obtained from their own tuberculin by prescribing exercise, such as an hour's walk; then the temperature will be found to be one-half to one degree higher, and the pulse and respiration increased; supposed to be caused by an increase of absorption of toxin,—thus by a process of auto-inoculation the existence of an incipient process may be corroborated. The specific test and the X-Ray examination afford invaluable corroboration, but in the main physicians must depend mostly upon the old and tried classical methods. First the family history is of great value, then the personal history, occupation, intimacy with consumptives who expectorate, the objective and subjective symptoms. The patient should undergo inspection, palpation, percussion and auscultation while the chest is free from clothing.

To summarize, the earliest evidences of pulmonary tuberculosis consist of a combination of symptoms, which according to such masters of Phthisio-therapy as Trudeau of the Adirondacks and Janeway and Knopf of New York should be considered in arriving at a diagnosis of incipient tuberculosis. The most important are:

1. A cough lasting a month, except whooping cough.
2. Poor appetite (especially in the morning), and indigestion, loss of weight and strength, and pallor (generally "run down").



3. Hoarseness, lasting several months.
4. Spitting, especially in the morning.
5. Night sweats.
6. Spitting blood.
7. Fever in the afternoon, shown by flushed face and tired feeling.

Any, several, or all of these symptoms coming after a severe cold, grippe, bronchitis, whooping cough, measles, typhoid fever, or any other acute disease, may indicate tuberculosis.

Frequent physical examinations should be made. The germs may not be found the first time the sputum is examined, and indeed they

may not be found at all until the disease is far advanced, and suddenly reveals itself in the fulminating type with symptoms resembling typhoid fever or malaise. Light percussion over the apex region and the posterior border of the lung after the method of "Krönig" is most valuable in discovering slight infiltrations. Auscultation will substantiate the suspicion when a harsh murmur is heard representing a mixture of the bronchial and vesicular breathing. Intermittent respiration upon inspiration, a pleuritic rub, or prolonged murmur may be detected upon expiration, the vocal fremitus is increased and the resonance is found impaired over the affected area.

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## OBSERVATIONS ON THE GENERAL PRINCIPLES OF HOSPITAL ORGANIZATION\*

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**Simplest Form of Organization.**—In any small establishment, whether store, factory, or hospital, so long as one man assumes absolute control, that man is the organization, and, if he is capable and attentive to details of management and is wise in the treatment of his men, efficiency and harmony are a natural consequence. Such a man may have little or no conception of that elaborate division of labor necessary for the successful management of a great industrial plant or department store, but within his sphere his organization may approach the ideal.

**Hospitals lack Efficiency because old Organization is Outgrown.**—Hospitals in this country, whatever may be said of their business administration, are on the medical side, very largely still laboring under a system of organization essentially outgrown. They have, generally

speaking, been established when the cities where they are located were mere towns. It was so arranged as to give every influential doctor in the community a place, in order that the institution might derive as great financial support as possible. When the towns became cities of greater consequence, the outgrown plan of organization has been suffered to remain; hence the hospitals, in their development and their contribution to the general welfare, have not kept pace with that to be seen in enterprises not thus hampered. The work accomplished has, under these conditions, been chiefly that of *individuals*, working, it is true, with the assistance of the hospital; but it cannot be denied that very far from what is possible or what may reasonably be expected, has come out of these institutions as a result of direct, concerted institutional effort.

**Trusteeship; its Responsibilities and its Pleasures as an Avocation.**—The ma-

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\*Read before the Detroit Academy of Medicine, March 9, 1909.

jority of hospitals are governed by boards of trustees, membership in which has been looked upon as largely honorary; but the only honor which can permanently attach to these positions is that which comes as recompense for sacrifice in behalf of the institution. To derive this recompense, board-members must have a fair understanding of hospital methods in general, and of what is being done by the more progressive institutions of the same class to broaden their scope of usefulness. A few men, connected with such boards, will go further and devote a part of their leisure to special studies, in the same effort; they will compare methods and results with those of the best institutions to be found, in order that they may know how to make theirs the best possible under the circumstances.

The board-member who thus makes the hospital his avocation sees first, of course, the restoration of many sufferers to health and to their ordinary pursuits of life, but further he comes to feel that he is part of a great educational institution, the effects of which reach the community in many ways. Upon the proper administration of the trust placed in his hands, largely depends the development of capable men and women who, as physicians and nurses, are to assume responsibility for the care of the sick in the community outside the institution. Of ever-increasing importance, though more recently recognized, is that still greater responsibility to give favorable opportunity for those who assume direction of medical charity within the institution to, crystalize the experience thus gained and make it available to those who are fighting the very causes of disease. In this last-named function of the hospital, the trustee may well have an especial interest. Here lies the spirit of the age. Many there are who have not yet grasped it, but the difference is vast between the effort to relieve a sufferer

already stricken, with odds often against the success of the effort, and that far-reaching aim which would remove the source of danger. In this work, the trustee should keep in close touch with the staff; he should seek personal contact with the workers in the different departments, to learn of their purposes, their ideals, and their accomplishments.

#### **Possibilities of the Small Hospital.—**

Hospital organization and management will necessarily vary much according to the size of the institution and its surroundings, as regards both the profession and the community. A small hospital that is personally conducted by one man, especially if it be for the accommodation of his own specialized practice, will require no staff and little organization. If such a small hospital accommodates all classes of cases, a staff of assistants or of associates will become necessary whenever the head of the institution recognizes that there is more work than he can do or that there are certain cases which some one else, by reason of greater special experience, can better care for. This sets up a kind of co-operation, which in the absence of any free-bed or out-patient service, is purely, for business ends. Scientific work, under the circumstances, is a matter of individual interest and effort only. Such hospitals, even with their limited scope, serve a very useful purpose in smaller towns, where they become the means of supplying to the local profession certain laboratory advantages that aid in raising the general standard of practice in the community.

**Conditions in the Medium-sized Hospitals.—**In medium-sized hospitals, of cities generally, we find a variety of developmental conditions, not all equally logical nor equally fortunate in results. Some of them, having merely grown larger, have in no wise taken account of the needs of the work to be done. In

spite of the fact that considerable sums have been accumulated for the dispensing of charity, the men who make up the staff go on doing all kinds of work and the patients fail to gain the benefits of a natural differentiation and consequent division of labor. In a certain proportion of institutions, a differentiation of special fields of practice has been brought about, but the number of men to do the work has been out of all relation to the number of patients to be attended. The result has usually been that coördinate appointments were made to the same service, a condition which could be met in one of two ways. First and rarely, if there were a large enough material, each of such coördinate heads of a department could be given his own wards or division, a plan which would have the advantage of setting up a rivalry in good work in corresponding lines thus made comparable; and, on the other hand, the whole material could be, as it usually was, turned over to the men who held appointments, each in his turn.

**"Rotation" and its Effects.**—This plan of "rotation," as it is called, which in every case compromises the interest of the institution, means that no consistent plan of treatment of the patients or of study of the materials afforded by their cases is possible; and, as a result, *the hospital as such does no scientific work*. Everything of this nature is the individual work of men who, taking advantage of what the hospital affords, may or may not do valuable work, but no united effort by the staff to make the best use of the material in a way to become a credit to the institution is possible under this shifting, unstable plan.

In this connection, let me quote the words of Dr. W. S. Thayer, of The Johns Hopkins Hospital, in an address at the New Orleans meeting of the American Medical Association, in 1903:

"The most serious impediment in the way of

advance in our methods of clinical study and teaching is the widespread institution of *rotating* services in our hospitals. In no service where the head of the department changes every three or four months can really valuable investigation be accomplished."

And the editor of the *Journal of the American Medical Association*, commenting on the address of Doctor Thayer at the time, said:

"Dr. Thayer refers to some of the evident short-comings of the majority of our public and semi-public hospitals. He says that the most serious hindrance to advance in clinical study and teaching is the prevalent custom of rotation of hospital services. Probably no competent, thoughtful medical man can question the force of this criticism . . . . Nothing but perfunctory, routine work can be expected when the chief of a service changes every three to six months. In business undertakings of all kinds, in schools and other institutions such rotation of service does not obtain. . . . The rotating service is a makeshift to lessen the individual burden. If our hospitals are to grow in usefulness and develop, this makeshift must give way to the fully organized services with permanent chiefs and graduated staffs of assistants down to the interne and clinical clerk. . . . In every large city of the United States are public and semi-public hospitals in which the work suffers from the lack of adequate organization to such an extent that conditions in many places really cannot stand with credit even hasty investigation. The first step in this advance must come from the medical profession itself. It is not creditable to a great profession like ours that its members permit themselves to be party to slipshod methods of hospital work merely because politicians and lay managers will not or do not know enough to institute rational principles into the hospitals under their charge. . . . We hope that continued agitation of this subject soon will awake the altruistic spirit that ever must guide the medical profession, and that systematic efforts be made to improve the present conditions in our general hospitals."

**A Higher Type of Hospital.**—These quotations point the way to a higher type of hospital, in which a natural differentiation and division of labor does obtain



and efficiency of service is favored by a definite placing of responsibility for the work to be done, and by a fair acknowledgement of credit for results accomplished. Here appears the possibility of real coöperation by the whole staff of the institution in the aim to further medical science.

**The Largest Hospitals.**—Of conditions in the largest hospitals, two general facts are to be observed. First, as with those in cities of somewhat smaller size, many are prevented from gaining the advantages of rational differentiation and harmonious coöperation, by prejudice and the domination of selfish interests to which the hospital has long been sacrificed. Rotation in service remains the rule and the greater the number of workers in each department who are not needed, the weaker the department and the greater the degree of sacrifice on the part of the hospital. Any scientific advance made is wholly due to personal effort. Second, those men who exercise a predominating influence with the governing body sometimes appropriate to their own use the larger part of the freed material and bring some prominence to the institution by becoming great themselves. These men find this organization, or rather lack of organization, to their advantage, but it must be recognized that it would be better for the institution and the community if new branches of the work were created and developed rather than that one man be allowed to monopolize the clinical material over so broad a field. The cases would thus be more carefully studied and more workers would be given opportunities by increasing the number of departments. The organization of any one department should include *as many men as are necessary to do the work well*; there should be one responsible head, and he should have an assistant capable of assuming the work for any short period during which the regular director

may be absent. If the department at times has more material than one man, with his assistant, can satisfactorily care for, then an "associate" should be appointed.

The possibility open to the largest hospitals of developing a powerful agency in the fight against disease, has been clearly illustrated by what has been done at Johns Hopkins. To be sure we see here the directing influence of the university and a peculiarly brilliant aggregation of medical minds filled with the purpose of searching for truth for its own sake, and some will say that nowhere else in America do conditions make such an effort possible. This is only relatively true; men trained in these surroundings or at any of the best medical schools know how to carry on the same work and with the same spirit under other conditions. Too often such men will be found "going to seed" if left to nothing but the opportunities afforded by a private practice, while, in an institution, not to work and grow would be held to be a disgrace. The quantity of work possible might not seem large as compared with that turned out from such a hospital as Johns Hopkins, but if the men were true to the traditions of their teaching, nothing could prevent the institution from deriving a reputation for the quality of its work.

Incidentally it may be mentioned the ideal of what an organization of this kind may accomplish, with plenty of means at its command, is just now being shown in that marvel of scientific possibilities, the Rockefeller Institute. Here again are conditions which cannot ordinarily be duplicated, but much can be found which may inspire and lead to results, if only the spirit of the institution be appropriated.

**Adaptation of Organization to varying Conditions.**—In hospitals which accommodate only pay patients, scientific work depends wholly upon individual effort,

except in so far as the laboratory may be said to be coöperative. Moreover the records, especially those of the clinical side, cannot from private patients be treated with the same freedom as would be perfectly proper in the free-bed cases. In mixed hospitals, with both free and pay services, the organization of the free services, so as to make them actively alive to the needs of medical science and their own opportunity, would appreciably raise the standard of practice upon the pay side, as well as influencing favorably that of the whole community. It is true that in all but the largest cities the material will rarely be large enough to run parallel services in the same department and thus, on a rational basis, multiply opportunities for clinical work. Not every one in a hospital can be the head of a department, but if there is in the staff any true spirit of research, a spirit not prompted by ulterior ends, there will be no trouble in finding men willing to serve as assistants and associates to "directors" of departments, regardless of questions of mere prestige and precedence. The higher the dignity and general standard of "assistants" in a hospital, the greater the hope of the institution becoming really great and of continuing so. For the recognition and to a degree the endorsement of the best men in the profession by the hospital, it is well to enroll a separate staff, which may be called the "visiting" staff as distinguished from the "attending" staff. The latter would have full charge of the free work, while the "visiting" staff would have the freedom of the hospital for their pay practice. In this way the advantages of a "closed" hospital could be had, while its privileges would not be unnecessarily restricted. If it is preferred to be still more liberal, then a list of physicians in the city eligible to practice in the hospital should be kept by the hospital board, and any man of integrity and professional decency should

be registered if the accommodations of the hospital will permit.

#### What the Organization should provide.

—It goes without saying that the best man available must be chosen to head and direct the work in each department of practice in the institution; and this "directorship of the department" should be *the unit from which the whole organization is built up*. Within his own department, this director should be interfered with as little as possible, and still assure the hospital the most fruitful results from the work of his department and help it to relate itself best to the common aims of all departments. Collectively a "council," to be composed of all such directors of departments, should be conceived of as the mainstay of the board of trustees in an advisory capacity on all matters relating to medical or institutional policy.

For purposes of efficient administration, an *executive branch* of the hospital management must be created, and upon the wise supervision of this branch by the board of trustees, so as to guard against abuses of the authority necessarily conferred, will depend, in large measure, the success of such administration. The practical method of carrying out this supervision will appear later. In any hospital that has come to what we have called the medium size, the necessity becomes apparent for the division of the departments for administrative purposes, and in any such separation it is important that the "divisions" shall be formed by a grouping of the departments in accordance with *natural*, common lines of interest, rather than by an arbitrary parcelling off for prudential considerations. In a hospital which is conceived to be progressive and seeking to develop its scientific possibilities, it would be logical to place all the agencies of research, such as the laboratories, the case-records, the library, and the publication

of scientific reports, under the general supervision of a "chief," and those functions taken together might be said to constitute a division of "laboratory diagnosis and research." In the same way a division is formed by those departments of practice in the hospital, in which treatment is chiefly surgical; and the interests of this group could be watched over by a "chief of the division of surgery." Finally a division of "medicine" would likewise be constituted by those departments in which treatment was not distinctly, or at least primarily, surgical. The grouping of departments thus into natural divisions provides, in the chiefs who administer the affairs of each, an *executive committee* that readily brings the board of trustees into immediate touch with any department, carrying to the workers the will of the board and acquainting the board with the needs of the various departments. In matters of greater moment, a formal expression by the "council" in deliberative session and a written communication giving a report of these deliberations would be the natural course.

**The Head of the Staff.**—The question of the head of the staff is one which must be determined by the conditions presented in the particular institution. There can be little question that, especially in the largest hospitals, the "medical superintendent," as that term is used in the Johns Hopkins and other hospitals, is practically a necessity. By this official the hospital is kept in constant touch with the board of trustees, almost as completely in fact as though the board were in constant session. An executive committee, such as I have outlined, then goes to this representative of the board rather than to the board itself. In smaller, medium-sized hospitals, the practical consideration of expense may lead many boards to decide against employing this official. It must be understood that only a man peculiarly qual-

ified by breadth of experience and of outlook as well as depth of interest in all the functions of the institution, should be clothed with the amount of authority and responsibility necessary to properly administer this office. A smaller man will prostitute it to his own ends or allow others to make him their tool, and when a man is found who meets the qualifications, he will be able practically to name his own salary, and properly so; and he should be given to understand that his tenure is practically assured.

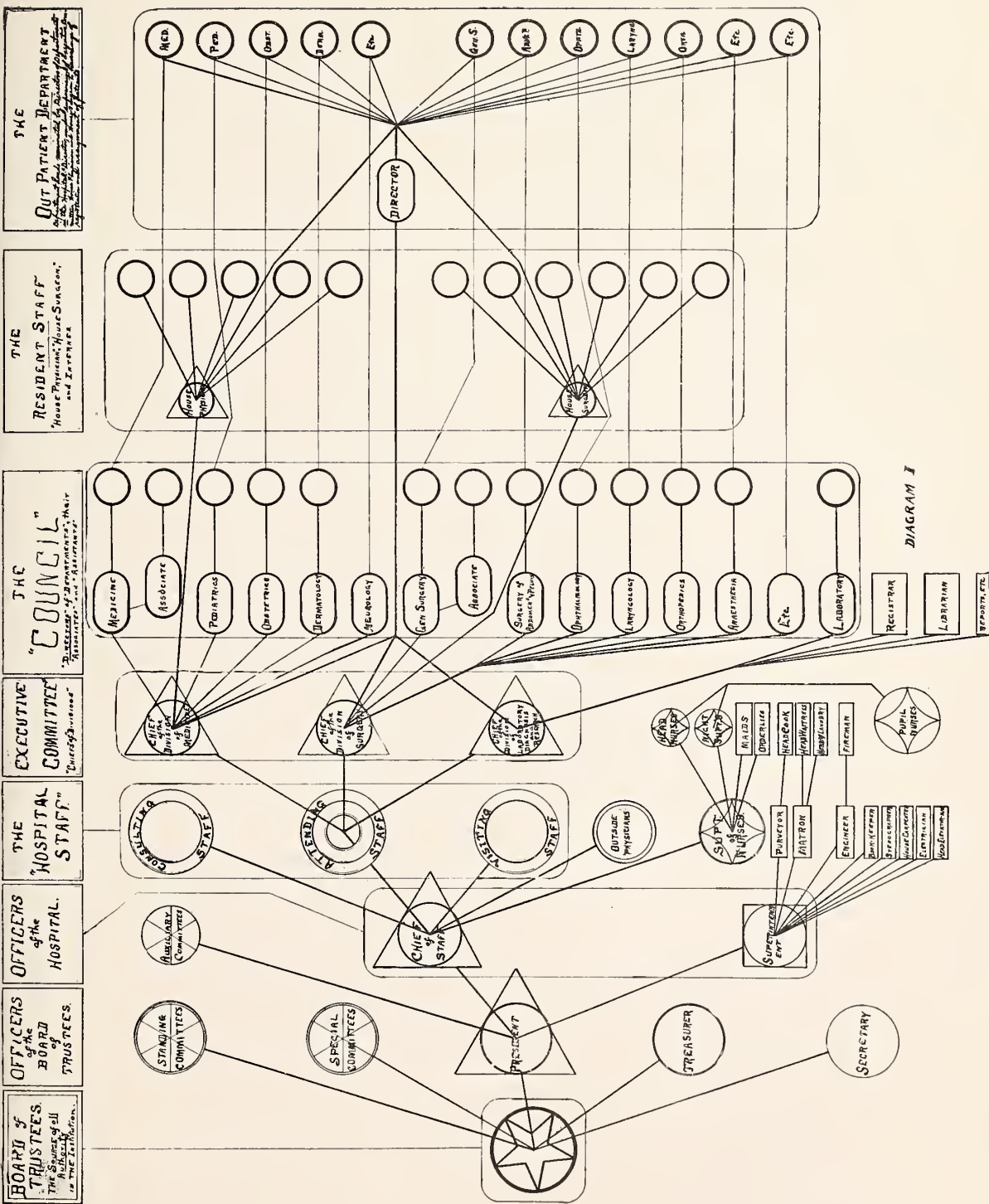
If the institution cannot afford this desirable condition, then it remains to bring the working force in the institution into the closest possible touch with the board in other ways. As above pointed out, the executive committee should be required to render its reports regularly to the board in session. This will give the board a close-hand view of the progress of affairs relating to all departments. For those matters which do not fall within the scope of any one division, the *chairman of this executive committee*, whether or not he be dignified with the title of "chief of staff," would be the one to answer. Much of the work of supervision that ordinarily would fall to the "medical superintendent" would by this plan be assumed by the executive committee, especially the chief of the research division.

**Why is the "Council" necessary?**—It remains to be shown what the functions of the "council" should be. While this is constituted by the responsible heads, or "directors," of all the departments as the voting members, the "assistants" should be invited to take part in the discussion of any matter under consideration. It is recognized in industrial enterprises that the more intelligent the workers and the more they can be made to feel a personal interest in and responsibility for the work in their charge, the better the results in the output. We may here see a further similarity if we



## DIAGRAM I.

Plan of organization in which cooperation between the heads of departments gives a stimulus to combined, institutional effort, while that between the Board of Trustees and these heads of departments collectively, in Council, assures efficiency in the executive offices. The "Executive Committee", composed of Chiefs of the Divisions, would be chosen to look after the interests of departments in their respective divisions; the Chairman of this executive committee, or Chief of Staff, would, with the assistance of the committee, have supervision of the more general interests of the hospital, so far as medical considerations were involved. The means of expressing any disapproval of methods of the executive officers, or of communicating its wish on any relevant subject, as well as of nominating candidates to fill vacancies to any place on the staff, should always be open to the Council; but this expression by the Council would be received by the Board as advisory and not mandatory. By this plan the President of the board of trustees or the Chairman of its most important committee can be constituted its representative for practical purposes when the board is not in session.



### DIAGRAM I





assume that the individual worker is, like the institution for which he is working, to receive his reward in consequence of sacrifice of temporary self-interest and in terms of satisfaction in results. He thus enters what is really a profit-sharing concern. With sufficiently intelligent workers, this plan has been demonstrated to be most satisfactory in the industrial world, and, if we are compelled to admit that a similar plan could not be applied to hospitals, it would seriously reflect upon the reputed intelligence of the medical profession.

To go still further with the industrial figure, it is plain that even though we should deny the worker any voice in the plans for the work the institution which he serves, the latter still is responsible for his protection and his just pay. If in a medical institution the worker receives his reward only in the reputation honestly earned by personal sacrifice, it is no less the duty of this institution to see that the worker is given freedom to work out his ideas and then is not robbed of whatever just credit may be his portion for the work. These credits make the reputation of the worker and are a measure of his usefulness to the institution and to the community; in the form of records of his cases studied, they must be carefully filed and catalogued. The worker is further put on record in the "reports" of scientific work published from time to time under the auspices of the hospital or elsewhere. Here his individual responsibility ends, but the hospital, by accumulating records and reports of cases thus carefully studied, is coöperating with that earnest class of men who are carrying on independent research on many vital questions wherever such records are available.

Recognizing then the value of such records, both to the hospital and to the worker, it is plain that the "council" would be a force behind any part of the hospital management entrusted with

their care. This is given simply as an instance of an interest which would be much better cared for if the directors of departments, in council, were given a voice before the board in all such matters. Every director should share equally in influence and opportunity to develop the work of his department; and this equality will be much more a fact if their opinions collectively expressed are placed before the board for its guidance. While the board would come more and more to respect the opinions of its staff thus expressed, the final judgment of the board, whatever it may be, should never be questioned by the staff.

**Reorganization of Old Hospitals.**—In any effort to reorganize older hospitals along the lines above laid down, it must be considered vital that a single, responsible head should assume direction of each department of practice. As many assistants as are necessary to do the work well should be appointed by the board upon the nomination of the director. "Associate directors" may be appointed in any department to care for the department in any prolonged absence of the director or to take part in the regular work at times when there is a surfeit of material. In either case however the responsibility for making the work of the department continuous and of seeing that scientific considerations are not neglected, rests with the director himself.

It may be found that professional feeling runs so high that a compromise is demanded. The old rotation in services dies hard. If the hospital board is helpless, then this much of compromise may be admitted without actually putting out the spark of vitality in the reorganization: the men who have "made the institution great" may be appointed to these "associateships" as a means of satisfying considerations of dignity. If appointments to directorship are made on merit only, regardless of previous rela-

## DIAGRAM II.

Plan of organization where the authority of the Board of Trustees is centered in one man who is thus made responsible for the whole administration, both medical and financial. Only a man of rare qualifications, and one who had no other interests in business or in medical practice, could assume to administer wisely and fairly so large a trust, and he would command a salary correspondingly large. He should be provided with a residence at the hospital and should be in practically constant attendance. This plan of organization, in the hands of the right kind of man as "medical superintendent", would most certainly assure a future for the hospital as a progressive and scientific institution. In the hands of one not properly qualified, it offers the way to correspondingly marked abuses. For this reason, the institution of a "Council", of the heads of the departments of practice in the hospital, remains still a valuable function in advising the board of trustees. The broad-minded, capable superintendent will welcome such criticism as may be offered and such suggestions as may be made in this way.

# PLAN OF HOSPITAL ORGANIZATION UNDER A "MEDICAL SUPERINTENDENT."

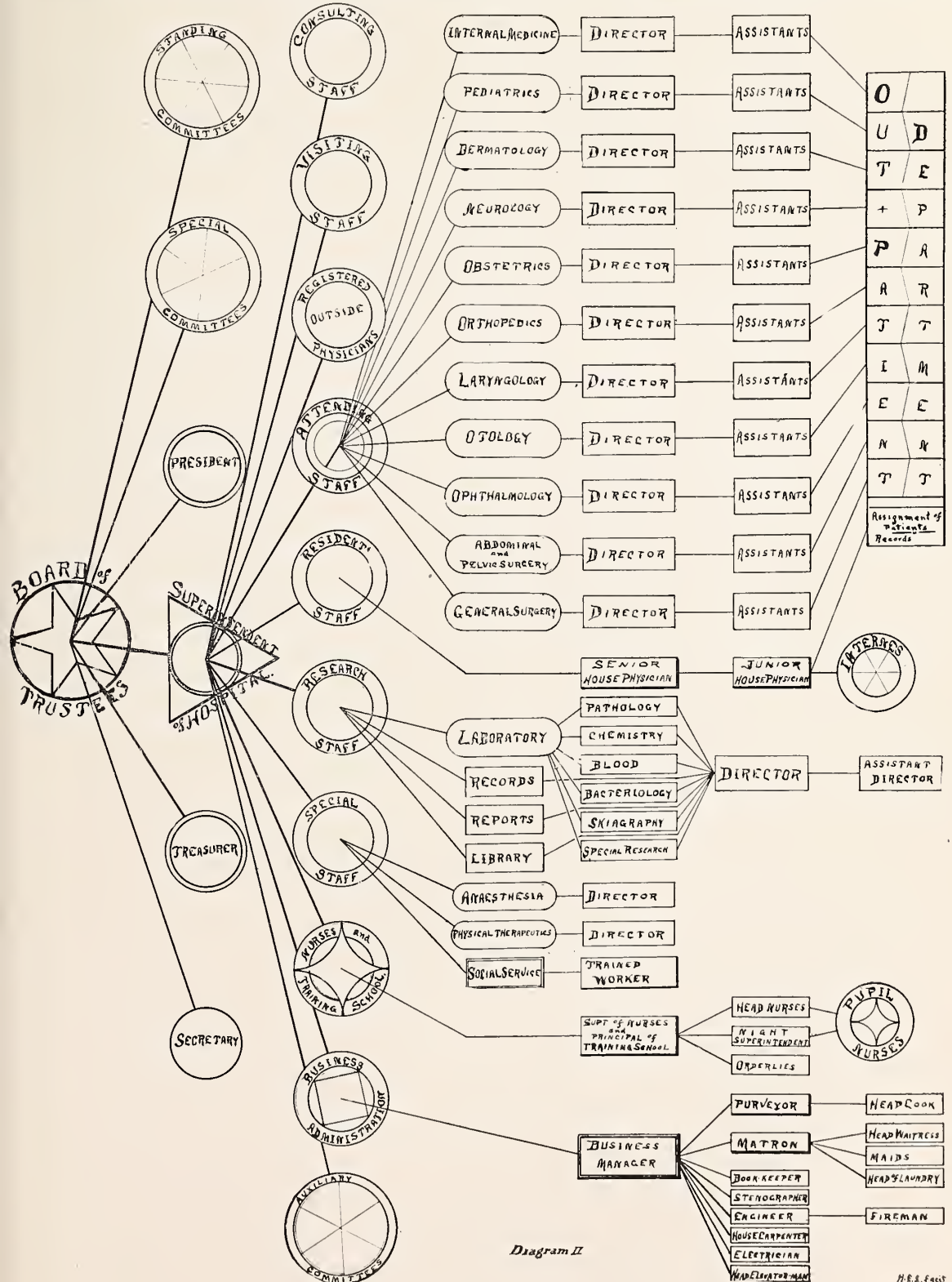


Diagram II





tion to the hospital staff, then, with a reasonable assurance of harmony, the institution should begin soon to forget its past and to wake up to its opportunity.

An age-limit is also an important consideration in the reorganization of these institutions. It is better that a man approaching the time when he is to be naturally retired should know it and be prepared for it rather than have his pride injured or that the hospital be made to suffer for the fact that he has none. When a man has had such a service for fifteen or twenty years, he should have accumulated records and experience enough so that he will be glad to have relief from the routine of hospital responsibilities in order to work over his accumulated material for publication. In some of the best hospitals, this idea is carried out even farther, so as to limit the period of service quite regardless of age, but there would seem to be less reason for such a provision. In the plan suggested above, of appointing associate directors for prudential reasons, the age-limit would be a means of reducing conditions to normal by a natural process of elimination.

**Hospital Ideals in General.**—Besides the general aims of hospitals to relieve physical distress and to promote the public welfare in educational and scientific ways, it is coming to be recognized that the progressive hospital must touch human interest in still other quarters. In the best hospitals of the eastern states, the so-called "social service" is being taken up with enthusiasm and success. In the hands of the trained worker, this service, especially in connection with an

efficient out-patient department, is of great practical assistance to the hospital; as well as bringing help to a greater number of sufferers. Every charitable institution is to some degree imposed upon by those unworthy of receiving its benefits. Such deceit will not so often be successful if patients, even in part, are visited at their homes; and on the other hand much well-directed charity can be brought to helpless and hopeless men and women in this way who would leave the ordinary free dispensary in despair. In this same work is a large possibility in the practical training of nurses, so largely left at present to the necessarily artificial conditions inside the hospitals. Nurses will more early and certainly attain that professional spirit that characterizes the one worthy of her calling when they learn their art in part amid the surroundings and with the sacrifice which service in visiting such people in their distress entails.

In such an institution as I have outlined, in which the spirit of self-sacrifice, rather than of sacrifice of the institution to personal ends, shall take hold on the workers for the sake of the work itself, the benevolent people of the community would see a reliable and efficient means of dispensing that portion of their wealth which they choose to devote to charity, and such an institution need never lack for funds to carry out any undertaking; unfortunates, in return for placing themselves under scientific observation, would receive the best treatment that science up to date can devise; the community would be served by more capable physicians and nurses; and the ethical standards of the medical profession would be favorably influenced.

#### Discussion.

In the discussion of the foregoing "observations," which were originally given as a talk rather than as a formal paper, a number of the younger men, who had had their experience in the Eastern hospitals, urged the employment of a "medical superintendent." As I have indicated,

this is at once admitted to be the ideal *if* it can be assured that a man sufficiently earnest, broad-minded, and independent to see always first the deepest and truest interest of the institution, will be obtained and retained. It must be admitted, however, that most men in this position would

find it difficult to submit their administration to such free discussion as I have held to be a proper function of the heads of departments in council. Practically, instead of a free interchange of opinions on matters of policy, the average man available for this place would consider that he was to grant requisitions for the needs of the work as favors to the workers, high or low. I only offer this criticism to show that, even with a "medical superintendent," the ideal is not necessarily attained. It is a fact that, with such an official embodying the authority of the board of trustees, practically the success of the plan depends upon the temper and character of *one man*; while, in the plan that I have outlined, the interests of the institution are under the constant observation and consideration of a *small body of men* close to the work, who are in a position to detect abuses and who hold the means of communicating at any time their opinions to the board.

The one other criticism offered in this discussion was that no hospital can do great work without being under the monarchical dictation of some man himself great. This would seem to suggest a comparison of the systems of government supported respectively by two great men, Napoleon and Washington. The one stood for

the principle that he, as dictator, could look out for the interests of all; the other, certainly no less great, was willing to lend the force of his greatness to a plan of government which would allow others an opportunity of showing how well they could do. Time has shown which of these plans had the element of viability.

It has been offered in criticism that the plan I submit is "unwieldy." This would certainly be a just criticism if the "council," as detailed, were made more than an advisory and nominating body. The fact that the workers are given an opportunity for free expression and criticism in such a council cannot be other than a safeguard against trouble, while the irrelevant can be practically eliminated by giving a vote upon recommendations made to the board of trustees to directors of departments only. If, in the light of such recommendations, the board of trustees will always act with perfect independence and a purpose to administer the hospital in the spirit of its trust, the plan will be found not only workable but efficient. In the same way, a check is placed upon abuses of authority in any part of the executive branch. If the executive, as is often the case, is the only one who has practical access to the board, then such abuses are invited and matters may go from bad to worse until revolution seems the only remedy.

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### A Few Facts.

Medicines administered by the rectum or vagina should be given in *twice* the dose by the mouth. Medicines administered by the hypodermic method should be given in *one-half* the dose by the mouth.

Be cautious in giving atropine to flaxen-haired, light-complexioned, nervous women.

Be cautious in the use of morphine subcutaneously after opiates or morphine have been given by the mouth or rectum.

The healthy mucous membrane of the bladder never absorbs medicine; an ulcerated vesical mucous membrane does.

Chloral hydrate should be exhibited with great care.

To determine the proportionate dose of a drug for a child or infant, divide dose for adult by

$$\frac{\text{Age of Child}}{\text{Age of child} + 12}$$

Eye-washes of nitrate of silver, if long used, discolor the eye.

Eye-washes containing lead are apt to leave a permanent opacity where there is any ulceration.

Children are especially susceptible to the narcotic action of opium and its alkaloids.

A catheter should never be *forced* into the bladder. All catheters should be kept perfectly clean. After each using they should be dipped in carbolyzed oil, washed in warm water, and, if gum elastic, be put away in zinc powder, powdered soapstone, or starch. All soft rubber articles are rendered hard and brittle by contact with oil or grease. Catheters used in puerperal cases should be rendered thoroughly aseptic.

Never attempt to reduce a hernia by force.

Use hot water for bruises, cuts, and as washes in catarrhal disease. It is superior to any liniment in rheumatism.—*Med. Summary.*



## ERGOT\*

DAVID INGLIS, M. D.,

Detroit.

When the invitation reached me to join with you in honor of Dr. Riley, it seemed to me that in no way could I better do so than by bringing my contribution toward that practical therapeutics which ought to be always in our minds, no matter how interesting the study of anatomy, physiology, pathology and diagnosis may be. For the end crowns the work, and the end and aim of our work is to cure the sick and alleviate suffering. Truly I think there is vastly more keen enjoyment in a careful diagnosis than in a game of chess, and a proven diagnosis is as satisfactory as the word "checkmate." 'Tis enough reward at the close of the game to say "Checkmate," but it won't do to end the game of diagnosis that way. 'Tis an ungracious thing to say, yet there are some who seem to think that a "practical" doctor is a grade below a scientific one. On the contrary, it seems to me that never before have we been face to face with such deeply scientific problems as are those which concern the interaction of the bodily organic structures, and the materials brought to them,—foods, internal secretions, and drugs. The great scientific problems before us now are those of dietetics and therapeutics.

What I bring today is not at all intended to be exhaustive, simply suggestive and drawn from daily experience.

In my younger days I pursued obstetrics a good deal, and it was then perfectly good form to give a woman a teaspoonful of Fluid Extract of Ergot at

that stage of labor when, the cervix being thoroughly dilated, the labor pains proved weak and inefficient. Given a good dose of ergot then, watch in hand I waited twenty minutes and put my watch in my pocket, for things began to happen. That great mass of unstriated muscular fibre, the uterus, now began to contract with power; evidently ergot lost no time in setting involuntary muscles at vigorous functioning. And it was not an abnormal functioning either, for when the child was expelled there followed no abnormal contractions, although it always seemed as if the general tonicity of the contracted uterus was well continued. Now, in the whole range of *Materia Medica*, how we welcome a drug which does things! Which does a definite thing, and that promptly. Here was a drug which went like a clock.

The years since then have taught me other things about ergot, or rather other forms of this same thing. For instance, called to see a robust man with an eight-day uncontrollable hiccough, one of a long line of doctors (none of whom, of course, got any fee), I sat and watched him. Hiccoughing all the time, about four times an hour he had a furious paroxysm of the spasm. Now I noticed that I could tell when the paroxysm was coming on by the fact that it was always preceded by a tremendous turgid flushing of his face and head.

I thought I could stop that, anyhow. Every constrictor fibre of his superficial arterioles let go, a complete vaso-motor relaxation was seen on the outside of his head; maybe it was the same inside!

\*Read before the Calhoun County Medical Society at Battle Creek, 1908.

Pull up involuntary muscular fibres? Ergot! Out of nineteen doctors who "dropped in to see the case" I got the glory and the only fee, for a full dose of ergot paled the face, brought relief from the hiccough, and sleep. Indeed, the wife called it the "sleeping medicine."

You see the two things were but one thing—relaxed fibres in a sluggish uterus; the same in the cerebral blood vessels.

Truly here is the key to ergot, but the key unlocks many doors.

No problem is more vexatious than insomnia. Nowhere is it more difficult to decipher the why? of it, but in a good many cases the cerebral circulation is far too active, will not come down; it is in these cases that ergot does its work, and, oddly enough, it will do it in what seem to be utterly diverse cases. Those with the appearance of cerebral flushing, like my man with the hiccough, and sometimes those with a dull mentality and a sluggish general circulation.

I can only explain it to myself on this basis: Ergot restores the normal tonus of relaxed involuntary muscle fibre; it does not set up a spasm, it never does, in any doses; it is a pure muscular *tonic* of unstriated muscle. In the latter class of cases, of insomnia, those with a sluggish circulation, it facilitates the circulation by increasing the tonus.

As with insomnia, so with headache. Ergot will not help a toxic headache, but there are many headaches and, what is the same thing, "headaches" down the cervical spine which are due to cerebral or meningeal congestion, and I know of nothing as satisfactory as ergot. The trouble is to learn to give a large enough dose to take hold.

There are really two kinds of congestive headache—active and passive. In the passive sort, the venous stasis kind, I add digitalis to the ergot. The problem is to set up a good arterial flow, to set up a circulation that will carry the

sluggish venous blood out and restore vascular tonus.

These are all disorders of brief duration. But the field of ergot is far wider. If it be in truth a tonic, then comes the question of maintaining tonicity. Can it be continued? Ever since I began as a student I have heard of the toxic effect of ergot—so far I have never seen it. Peasants, driven by starvation to eat the fungus with poor rye may have been poisoned by ergot, although I strongly suspect that starvation did a great deal more damage than ergot. I have an epileptic still under my care who started on ergotin two years ago, and has never stopped it, although he needs and takes fewer pills per day than he did at first. When he came to me he was a battered, scarred, pustular, bromide epileptic, a charity case. Now he earns his regular salary, wears a clean collar and a smile, and has a little nocturnal fit occasionally. One of three things did it—Providence, stopping the bromides, or ergotin. I leave it to you to distribute the credit. It would be just as foolish to attribute all cases of epilepsy to vaso-motor irregularity as in the case of headaches or insomnia. Nevertheless, the very periodicity of epilepsy suggests recurring periods of vaso-motor storm. Notice how close is the relationship of epilepsy and migraine; certainly the latter, whatever be the cause, is a vaso-motor storm, and I think we will all agree that in many cases epilepsy is likewise. How often we can trace both migraine and epilepsy to the general vascular irregularities which precede, accompany, or follow the menstrual time; we do not know what internal secretion it is which so upsets the vaso-motor control near the menstrual time, or what vaso-motor tonic is lacking when the menopause, natural or operative, has taken place with the consequent hot flushes and many results of vaso-motor disturbance, but that both epilepsy and migraine stand in close re-

lation with these disturbances is evident.

Again, nocturnal epilepsy evidently is related to that vascular change which comes with sleep. Do not misunderstand me. I personally am of the opinion that toxemia plays a great part in the causation of epilepsy as of migraine, but toxemia is not the only cause. Now in so far as these affections are dependent upon vaso-motor storms, it stands to reason that we may accomplish much if we can set up and maintain a healthy vascular tonus. I know of no more useful drug than ergot long continued.

Once more, it would be foolish to set up one explanation of the manifold forms of neurasthenia, but I think no one has watched the plump, apparently well nourished neurasthenic with his everlasting easy "give out," without feeling that if one could only get up steam, get some good, steady, even circulation established, things might go better. Ergot is not a panacea, but alone, or with digitalis, it does great good in some cases.

In exophthalmic goitre, we are dealing with what is probably the most profound vaso-motor affection which we ever meet. Here, if anywhere, some means of steadying the vaso-motor function is the one thing needed to meet the manifold symptoms. Theoretically ergot ought to be the drug, and in mild cases it does do some good, but the difficulty seems to be that the thyroid is putting into the circulation a vaso-motor paralyzer too fast, too strong for us to counteract. Nevertheless, the very phenomena of Graves' disease demonstrate the power of substances in the blood to profoundly alter the vaso-motor tonus.

The thyroid in health puts into the blood constantly a small quantity of an internal secretion, which certainly exercises a marvelous effect upon circulation and metabolism. The bodily structures depend on this chemical regulator. When in the field of nervous or mental diseases,

or other bodily disease, or surgical shock, it becomes a question of establishing or maintaining steady tonus of the vaso-motor system, it is logical to use, for long periods if needed, something which will do the opposite of what the thyroid constantly does in Graves' disease. In normal people we have excellent reason to believe that this is done by internal secretions, notably the suprarenal capsules. Certainly if we can set nature to doing the work in her own way, that is best, and our success in treating myxedema by thyroid is the basis of our hopes for an equally great success by other glandular chemicals, but until then ergot comes nearest to doing the work.

Time fails me to go into all phases of the rational use of ergot, but let me mention this: What we call erectile tissue plays a most important part in the sexual apparatus of both men and women, and a study of sexual anomalies shows that not a few depend on failure of the physiological tonus. I know of nothing which will do better service in excessive seminal emissions, and as an aphrodisiac to women, it is better than strychnia.

We have in the nose erectile tissue analogous to that in the pudenda, and the phenomena of hay fever depend on the sudden turgescence of that erectile tissue. Here again ergot finds a place.

As to manner of use: Personally, I mainly use ergotin by the stomach. Fluid extract of ergot disagrees with so many people and I find the results from ergotin equally reliable.

Alfred T. Livingstone, of Jamestown, N. Y., uses it hypodermically—indeed, advocates that use almost entirely. I do not find it necessary, yet I wish to commend to you his article in the *New York Medical Record*, for November 23, 1907. He has written from time to time on ergot, and my own confidence in it has broadened since I first read his



articles some years ago. I gladly acknowledge my indebtedness to him. Like all enthusiasts, it is possible he claims too much; possibly I do so tonight, but this is my message: Try it out thoroughly. When in any department of medicine you have the problem

of lack of the normal vascular tonus, try ergot. In the whole range of the physiology of the sympathetic nervous system, try ergot. Prove it out. I believe it ought to rank alongside of digitalis as one of the old reliables.

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## SOME NEW INSTRUMENTS.

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R. E. MERCER, M. D.,  
Detroit.

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**Tonsil Snare.** The snare shown was designed with the idea of combining lightness and convenience in use, with great power. It consists of a square steel stem, upcurved to meet the canula, a slide with windlass attached, good big thumb and finger rings and canula of shape to suit the individual user. The stem is ratchet-toothed on top to engage a fixed dog on the slide, making it self-locking, the curve in it makes the pull on the wire in a straight line. The slide combines a windlass with spring ratchet, so that it can only turn in one direction, and finger rings above and below stem, instead of on the sides, a more comfortable position for the hand in use and giving better control. The bottom ring is open in the cut, but a complete one would perhaps be as convenient. The whole snare can be readily taken apart for cleaning, is not clumsy, like the forcep handle type, engages the tonsil instantly, and has great power. It will pull a loop of any size, not limited by the length of stem or distance handles will open, through any tissue that the wire is strong enough to cut, or will break the best number 6 piano wire, on the straight pull if necessary, with ease. Canulas can be made

of any shape desired, the one shown is a very good one.

To use, pass wire through the canula and hole in windlass stem, give one turn and the wire is fastened. Take hold of snare, fingers and thumb in their proper rings, pass loop over tonsil, which should be well pulled out with forceps, if enucleation is desired, of course after freeing adhesions if necessary, and close hand. If the hand is strong or tissues soft it may cut through, but if not let hand relax, the slide will lock on stem from tensions of wire, turn windlass with finger and thumb of other hand and wire will cut through. To take apart, unscrew thumb ring, slip slide off stem, unscrew windlass key and slip off bottom ratchet collar and it is in pieces. Ordinarily all that is necessary is to unscrew top of windlass and raise hinged top of ring; it makes wire easy to remove and will permit all the cleaning, preparatory to sterilizing, that is usually necessary.

**Tonsil Scissors.** These scissors cut at any angle flat to the handles and can be turned instantly from left to right or back with curves reversed, by swinging around point A. The hand is down out

of the way and they are very convenient to use. As shown, however, they have one defect, cutting on closure of handles, when working on right tonsil, on open-

several years' use I have found it of so little consequence as to have been quite content to use the handle of a Tieman tonsillotome, as first designed. The re-

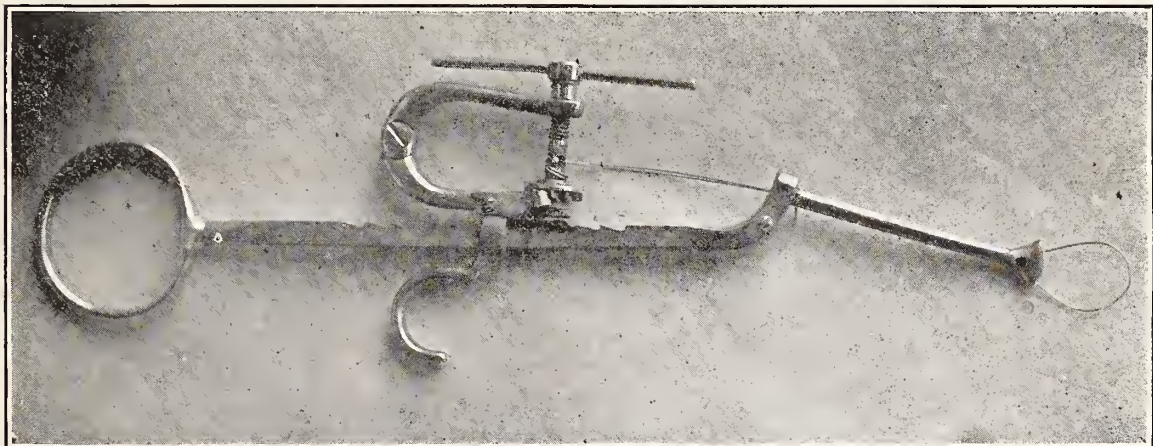


Fig. 1. Tonsil Snare.

ing when working on left. This is a defect which can be readily obviated by making the handles reversible, but in

versible handles are made in about a quarter circle curve, crossing for left, not for right, and using the same center

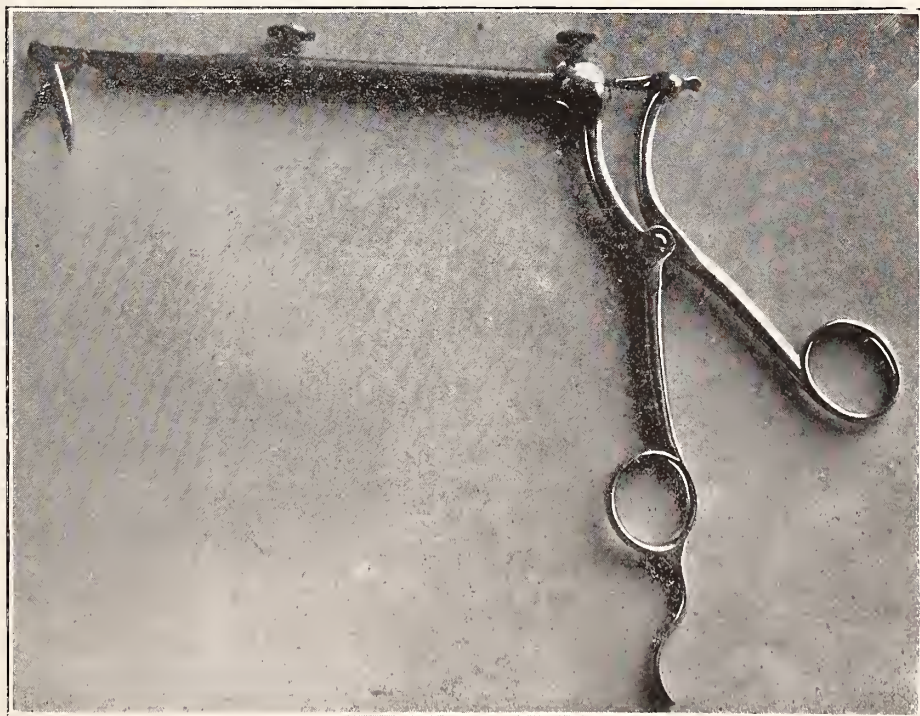


Fig. 2. Tonsil Scissors.



pin, they make the reversing more troublesome. The working parts consist of scissors mounted on a tube by one side, the other fastened to a smaller tube

a set screw, so allowing lengthening and shortening the tube, made necessary by the inner end of scissors becoming the outer in the reversed position.

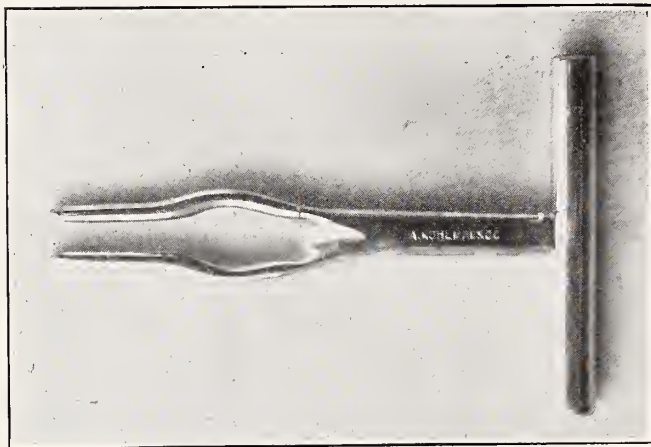


Fig. 3. Nasal Key.

which slides within the first and which in turn has an inner rod acting as an extension when necessary. The outer tube is slotted to admit thumb screw on inner tube, the inner is cut away at one

**Nasal Turn Key.** The cut explains itself. Turning the handle causes one jaw to push in one direction the other in the other, making a break *between the jaws*, not at some distance. It can be

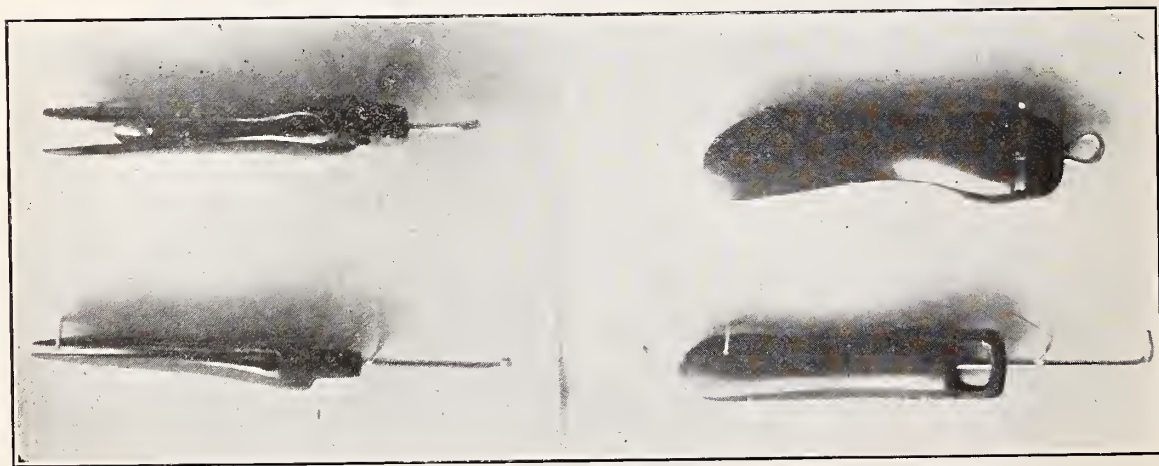


Fig. 4. Septal Splint.

end for about an inch, leaving a strap of metal which allows the other side of scissors to pass in the reversed position. The rod inside the inner is fastened by

used at any angle, for perpendicular or horizontal deflections, and in some instances makes possible an operation, which is practically making a simple



comminuted fracture of the septum, then holding it straight by splints or packing until healing takes place in the new position. Where saw cuts or crucial incisions are used, they need not be so extensive, except where there is dislocation from the maxillary ridge or the deflection is very close to the floor of the nose, when this instrument is useful until the parts are properly weakened.

With the present vogue of the submucous resection the older operations are more or less displaced, but where indicated this simple instrument will be found useful.

**Septal Splint.** This splint is inserted closed and when in position is opened by pushing home the obturator. It is practically painless to insert and remove, and admits free breathing and drainage. It can be readily made from an old hard rubber thermometer case or fountain pen cap, using an Otis' bulb pointed urethral sound as an obturator. Where hard splints are necessary it can be easily fitted to the individual nose by warming and bending the blades to suit, and will be found comfortable to wear and so easy in use that the patient can take it out to clean, and replace it if desired.

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## TWO CASES OF TRI-FACIAL NEURALGIA TREATED BY ALCOHOL INJECTIONS.\*

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R. J. WALKER, M.D.,  
Saugatuck.

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Butler divides tri-facial neuralgias into two classes. Under the head of Symptomatic Neuralgia he considers that class of neuralgias which occur as symptoms of other diseases, such as dental disorders, exposures, anemia, childbearing, diseases of the eyes or nose, syphilis, gout, rheumatism, diabetes, epilepsy, malaria and trauma.

This form of tri-facial neuralgia is very frequent, and occurs oftenest in the first half of life, and oftenest in females. Our efforts in this class of neuralgia must be directed towards finding and curing the disease which causes the neuralgia. The other form of neuralgia spoken of by Butler is the non-symptomatic, known as Tic Douloureux. I wish to report two cases of tri-facial neuralgia

known as Tic treated by deep alcoholic injections.

The fifth or tri-facial nerve has three branches we must locate in giving alcoholic injections. If the pain corresponds to the distribution of the ophthalmic division of the fifth nerve, we must inject the nerve as it escapes from the brain through the sphenoidal fissure at the back part of the eye; a depth of about  $1\frac{1}{2}$  inches from the surface. If the pain follows the distribution of the superior maxillary division we must inject this nerve at the base of the brain as it escapes through the foramen rotundum, which is at a depth of about two inches. If the pain corresponds to the distribution of the third or inferior maxillary division we must direct our needle so as to strike this nerve as it escapes from the sphenoid bone through the foramen ovale

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\*Read before the Fifth Councilor District Medical Society, January 14, 1909, at Belding.

at a depth of about  $1\frac{3}{8}$  inches from the surface. The needle therefore must be sufficiently long to permit the injection to be placed at a depth of from  $1\frac{1}{2}$  to 2 inches according to the nerve injected.

**Case No. 1.** Female, age 70, trouble in the inferior maxillary division. Family history good. Apart from having a rather weak stomach and a very slight tendency to anemia her previous health was good. Had had these attacks of tic for six years; at first only in raw, cold and wintry seasons. She had sought relief in many remedies, had treated with many doctors and had tried various climates. In spite of all her efforts the paroxysms of pain were increasing both in severity and in number. When first attacked she had a tooth drawn, hoping to get benefit in this way. Then began her real battle for relief. Various remedies and various doctors and climates got credit from time to time. Her troubles seemed for the first few years to run a course of from one to four or five weeks at a time and then disappear for a few months. This no doubt accounted for the credit given to various remedies and climates, as well as to various doctors in the early periods of the disease. The seat of her pain was referred, as before stated, to the distribution of the third or inferior maxillary division. For the two years preceding the commencement of her treatment by alcoholic injections her condition was piteous. Any change in temperature such as would be produced by the opening of a door or window in her room would bring on a paroxysm; drinking, eating, talking, frequently had the same effect. She kept her head and face constantly wrapped with shawls. She dreaded to speak, drink, or eat, and was steadily losing vitality because of her long fasting periods. The pangs of hunger and thirst were not to be compared to her paroxysms of pain. These became more and more frequent and for several months previous to the beginning of the alcoholic injections she was never free from pain. She seemed to be nervously and physically a wreck. During the last few months of her disease only two remedies gave even temporary relief. These were heat and static electricity. November 15th, 1908, the alcoholic injections were begun. Twenty-four hours after the first injection was given her pains were greatly reduced. She was hoarse, had difficulty in swallowing and speaking, and seemed flushed, as though she had considerable fever. Her uvula and the soft palate on the side injected were quite

edematous, her throat quite sore, and numbness existed over the region supplied by the inferior maxillary division. Being my first injection I feared almost every complication; and since there was visible swelling of the uvula and soft palate I thought possibly infection had occurred and an abscess was forming. In fact her temperature did rise to 100 but was below normal again in forty-eight hours. One week later her sore throat and other symptoms produced by the injection had disappeared and her pains were only about half as great as they previously had been. Six injections were made for the inferior maxillary division and three for the superior maxillary. They were given at intervals of about one week. All did not have the same effect, but each did some good. Some injections caused the side of the face to swell and one produced considerable ecchymosis along the region of the lower jaw. My first two injections were made with a sharp pointed needle; they were considerably less painful, but after inserting my needle in the second injection blood flowed from it so freely that I must have wounded the small or the middle meningeal artery or one of their divisions. It was after this injection that I got the ecchymotic condition of the skin over the lower jaw; and because of the fear of hemorrhage, my remaining injections were made with a blunt trochared needle. At the completion of these injections there was numbness over the region supplied by this nerve. All pain was gone. Food and sputum tended to accumulate between the cheek and teeth on that side because of partial paralysis of the muscles of mastication. At the present time, more than a year after her last injection, she is free from pain. An occasional slight soreness over the malar bone, temporary in duration, reminds her of the trouble that previously existed. She eats, sleeps, and talks naturally. She enjoys life and her general health has greatly improved. There is still some numbness on that side of the face and because of past memories she cannot be persuaded to throw away the shawl which still covers her head night and day.

**Case No. 2.** Male, age 73, family history good. Had yellow fever in Cuba years ago, but has ever since enjoyed excellent health till trifacial neuralgia attacked him six years ago. This patient had no tendency to anemia. As with case No. 1 he felt so positive the trouble was in a tooth that a molar was sacrificed. For the first two or three years, as in case No. 1, he had free-

dom from paroxysms for months at a time but his trouble grew gradually worse. During the last year of his disease he obtained considerable temporary relief from whiskey, the only remedy, he claimed, that did any good. He was taking three wine glasses a day with frequently one or more additional doses at night when the deep alcoholic injections were begun. As in the previous case his pains were limited to the inferior maxillary division. After giving him three injections at intervals of three to eight days he wrote me that he had been made much worse instead of better and would take no more. Later he changed his mind and took three injections from another physician; the last injection almost completely relieving the pain and leaving the side of his face numb for weeks. Eight months later his trouble returned and he again began taking whiskey, but in three months the paroxysms were so severe and were controlled so poorly by the whiskey that he came to me again for injections. He had left me before because my injections had hurt him so much; now he returned because the other man's hurt him worse. To enable him to endure these ordeals I now gave him one-half hour before each alcoholic injection  $\frac{1}{4}$  grain morphine hypodermically, which acted very nicely indeed. I gave in all six alcoholic injections, before he got complete relief. His face two months after my last injection is not numb and his masticatory muscles are in no manner weakened or paralyzed. He says that occasionally when eating he has a short twinge as of an aching tooth, otherwise his recovery is perfect. Although free from pain now, I believe in a few months this man's trouble will again return.

With patient No. 1, a thin rather anemic woman, there is after thirteen months, no tendency to a return. But the side of her face and her masticatory muscles are yet partly paralyzed.

At the present time people shift about from one doctor to another and from one remedy to another, to such an extent that each of perhaps half a dozen different medical men have statistics claiming the cure of the same patient. I have reported these two cases not because I believed I had obtained any unusual results from this treatment, but because seeing my patients as neighbors almost every day I sincerely believe my cases to be exactly as reported.

Both these patients claimed that these injections were extremely painful, and I

would have had difficulty in persuading patient No. 2 to take his last injections but for the hypodermics of morphine given one-half hour before the alcoholic injections.

To my surprise on two severe cases of sciatic neuralgia on which I tried these same alcoholic injections absolutely no relief was obtained. But for the relief of that form of tri-facial neuralgia known as Tic Douloureux, I believe medical science has in these alcoholic injections a wonderful discovery that is here to stay. I do not believe any treatment will cure all cases, but do believe this will relieve many patients who would otherwise find relief only in death or suicide.

From my very limited experience, I would say especially to those who have never given these injections, to use only a blunt-pointed trochared needle.

In answer to some questions, Dr. Hugh T. Patrick, of Chicago, writes that up to the present time, Jan. 12th, 1909, he has injected nearly 70 patients. There was paralysis of the external rectus of the eye in three or four cases lasting from a few hours to several days. In one case of paralysis lasting several months, there was also a tendency to erosion and ulceration of the cornea, also lasting several months.

In another case there is at present paralysis of the external rectus with ulceration of the cornea now healing.

In one old man with bad arteries, there is said to have been a sloughing of the soft palate. This sloughing began more than a week after his last injection.

Dr. Patrick says also, "Injections after a recurrence are as successful as the first ones. I think that in the course of time all, or nearly all, will relapse; a successful injection is pretty certain to give relief for more than six months, generally for more than a year, and I believe in some cases for about three years and possibly more."



## The Journal of the Michigan State Medical Society

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to B. R. Schenck, M. D., Editor, 502 Washington Arcade, Detroit, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions or communications.

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Subscription Price, \$2.00 per year, in Advance.

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### Editorial

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#### Preliminary Announcement of the Next Annual Meeting of the State Society.

The attention of the members of the Michigan State Medical Society is respectfully invited to the Annual Meeting of the Society to be held at Kalamazoo, Wednesday and Thursday, September 15th and 16th, 1909.

Voluntary papers are hereby solicited, and each member who contributes is requested to send the title of his paper to the Secretary of the Section before which he desires to present it. Each paper is limited to fifteen minutes and the title is to be sent as early as possible, not later than June 15th, to the respective Secretary of Section.

DR. G. F. INCH,  
Box A, Kalamazoo,  
Secretary of Section on General  
Medicine.

DR. R. E. BALCH,  
115 W. Lovell St., Kalamazoo,  
Secretary of Section on Surgery,  
Ophthalmology and Otology.

DR. C. G. PARNALL,  
Jackson,  
Secretary of Section on Obstetrics  
and Gynecology.

Papers for publication may be as long

as the members wish to make them, but the fifteen minute rule will be strictly enforced. It is especially desired that papers be illustrated by photographs, drawings, or charts.

It is requested that an abstract of each paper, not to exceed one hundred words, be sent to the Secretary of the respective section by July 15th.

No paper the title of which has not been sent in by June 15th, can be presented unless acceptable to the Secretary of the Section.

Detroit, May 1, 1909.

A. I. LAWBAUGH, *President.*

B. R. SCHENCK, *Secretary.*



**The Cost of Medical Defense** as now carried out in a number of medical societies is astonishingly low. The fact that it is inexpensive is proof of its unqualified success, for in no state has it been found that the amount first decided upon is inadequate, none of the leagues has become bankrupt and none has been discontinued. Some of the societies have had the defense feature for a sufficient length of time to prove that it is both efficacious and possible to be conducted at very moderate rates.

The Medical Society of the County of New York first took up the work in 1901 and it was later made a feature of the State Society. At present no extra per capita tax is levied, the funds of the society being used for the expenses of the defense committee.

The Chicago Medical Society began defending its members in 1903. Here one dollar per year is set aside in a special fund, out of the five dollars annual dues. Outside of Cook County, the members of the Illinois State Society pay one dollar in addition to dues of one dollar and a half.

In Pennsylvania, where the state membership is very large, an extra assessment of but ten cents per year is made

and this has been found ample to cover the running expenses.

In Maryland, the plan has been in successful operation for six years and no extra tax is levied beyond the state dues. These must be paid by March 1st in advance. No extra fee is charged in Massachusetts.

Iowa and Missouri each levy an assessment of one dollar per year. In Kentucky the league is separate from the State Society and open only to members of the latter, at five dollars initiation fee and one dollar per year dues.

The plan of our committee, as several times noted in these columns, is to collect one dollar and a half from each member for the first year and one dollar per year thereafter. A feature of our plan, as distinct from many others, is that the defense is retroactive within the statute of limitation. This feature is not thoroughly understood by many. It is best explained by an hypothetical case. Suppose Dr. A. treated a patient during February, 1908, and suit is instituted against him in January, 1910, 23 months after the alleged malpractice. If Dr. A. is in good standing in the society when the defense plan goes into effect, as, if adopted, it will on January 1, 1910, he will be defended for the case which occurred 23 months before. There is no insurance company which has this retroactive feature. Suits which have already been instituted or threatened, when the plan goes into effect, will be taken care of for the defendant, at actual cost.

The question of the adoption of the plan, the full details of which were published in the February issue, will come before the House of Delegates at Kalamazoo, during the annual meeting. Every county society should see to it that the delegates are instructed. In order to get the sentiment of all the members, the Council has ordered a postal card vote to be taken, and this will be done before the Kalamazoo meeting.

### Papers for the Kalamazoo Meeting.

In this issue of the Journal will be found the "first call" for papers for the next annual meeting of the Society, to be held in Kalamazoo on Wednesday and Thursday, September 15th and 16th. While an autumnal meeting of the Society is an experiment, it seems to be almost the unanimous opinion that the attendance will be larger in September than in May or June. Certain it is that there will be fewer counter attractions at that time of the year. The meeting place is in the center of a large medical population; it is readily accessible from every portion of the state; its hotel accommodations are good and the hospitality of its physicians well known. Everything points to a very large meeting.

Already the requests for places on the program are numerous, so that the Committee on Scientific Work will have no difficulty in filling the time of the section meetings. It will be a question of how good the papers will be, not how many; a question of quality rather than of quantity.

There isn't one of us expecting to have a paper at Kalamazoo who can fail to profit by some suggestions from Dr. Llewellyn Eliot, a medical writer of large experience, who, under the heading, "Journalistic Suggestions for Medical Men," has given some valuable advice. Some of his points are:

Make the title expressive and not too long. Titles such as "An Interesting Case," or "My Last Year's Experience" mean nothing and when the paper is published cannot be indexed.

For the ordinary fifteen-minute paper an introduction is not necessary. Plunge into the subject and get the attention of the audience at the beginning. If an apology for the paper is necessary, omit the paper entirely.

Omit long case reports. Give the essentials.

Systematize the subject matter, dividing the text into headings. This gives your hearer something to grasp hold of if his mind happens to wander.

Use, if possible, paper the size of the large letter sheet.

Have the manuscript typewritten.

Illustrate your remarks by pictures or charts. They hold the attention of the audience.

Dr. Eliot's concluding paragraph is worth quoting in full: "In conclusion, let me suggest—whatever you have to write, make it short and to the point; cut out what appear to you as beautiful flights of rhetoric; cut out every word that has no place in the paper. Take a little advice which, although written more than thirty years ago, is still good enough to paste on any writer's desk. It is:

"Whatever you have to say, my friend,  
Be it witty, grave or gay,  
Condense it as much as ever you can,  
And say it in the readiest way.  
And whether you write of household affairs,  
Or particular things in town,  
Just take a word of friendly advice—  
Boil it down."



**The Preparation of Copy for Publication** is a duty that falls often to some, and sooner or later to almost every one. The growing tendency to medical organization and the more general habit of writing and reading medical contributions, has brought nearly every ambitious physician into print. No one but an editor, however, realizes the great difference between medical articles as read by the author and as submitted for publication. Errors of construction, spelling, grammar and punctuation are considerably eliminated in the *delivery* of an address, but are impossible of concealment to the next reader. In no way does the preliminary education of a physician declare itself so quickly as in his written page, and in no way does

one estimate this education so quickly as by editing medical contributions.

It is not surprising that schools of the older regime turned out many men incapable of writing good compositions, because the requirements for entrance to medical schools were neglected. It is to be deprecated, however, that any school of today should be lenient with students who can build neither a grammatical sentence, nor spell nor punctuate it correctly, to say nothing of the higher elements of forensic composition. This class of students ought to be either barred from medical schools or sufficiently stimulated to acquire the lacking education. Medical educators are too tolerant of gross mistakes in class quizzes and in written examinations. An illuminating article on the spelling of medical students, by Dr. George Dock, betrays the carelessness in this primary feature of general education.



**A medical essay, to be effective,** should first be logically planned with regard to the development of the subject matter and the proper sequence of ideas. It is of great advantage to make a skeleton or brief before writing a single sentence. Then the headings and sub-headings should be clearly indicated, and the paragraphing arranged accordingly. Careful use of capitals and punctuation is a necessity, and long involved sentences are to be avoided. If written by hand, the writing should be legible, generously spaced, and done in ink. But in these days of stenographers, every article ought to be sent in typewritten form. Illegible, ill-constructed papers are apt to be postponed in publication in favor of typewritten copy. The writer's name, as he wishes it to appear, ought to be unmistakably indicated, together with an appropriate title, address, and information as to when and where read, if at all.



Suggestions of this kind appear puerile and presumptuous until one is convinced of the prevailing carelessness by actual demonstration. Thoughtlessness is as great a factor as ignorance, doubtless, but it is sometimes difficult to discriminate.



**Atlantic City, June 8th to 11th.** The American Medical Association meets on these dates at Atlantic City, the sessions extending from Tuesday morning until Friday afternoon. The trip from Michigan is a delightful one and many are planning to take advantage of the special rates which are offered. As nearly everyone in the state will pass through Detroit the following information is given for reference. It has been obtained from the latest circulars of the Central Passenger Association, and has been verified by the passenger agents of the roads leading out of Detroit. It is, therefore, presumably correct:

Tickets will be on sale from June 3rd to 6th, and the return limit is June 19th. The rate is a fare and one-half for the round trip, being from Detroit and return \$21 by boat to Buffalo, and \$23.65 all rail. The latter tickets are good going or returning on the "D. & B." from Buffalo. Many will enjoy breaking the return trip by taking advantage of this arrangement.

The boat leaves Detroit at 4 p. m. on Sunday. Dinner and breakfast may be obtained on board and connections made Monday morning with the train leaving Buffalo on the Lehigh Valley at 8 a. m. This train arrives in Philadelphia at 7:20 p. m. and carries a parlor car to Philadelphia. It is probable that Atlantic City may be reached that night, although, at this writing, the summer schedule on the Philadelphia & Reading has not been announced. This will make a splendid trip for those wishing to go through the mountains of Penn-

sylvania by daylight. The same Lehigh train may be taken by leaving Detroit on one of the evening trains on the Michigan Central Central (10:45 p. m. and 12:03 a. m.) If the boat is taken on Monday instead of Sunday, the arrival in Buffalo is too late for the 8 a. m. train on the Lehigh, but connections is made with the "Black Diamond Express" at 9:45 a. m., arriving in Philadelphia at 8:20 p. m. This will probably necessitate remaining over night in Philadelphia. The parlor car on the "Black Diamond" runs only to New York and will be available as far as Bethlehem, 56 miles from Philadelphia.

Many, however, will desire to go all the way by rail, thus saving considerable time. The popular train will undoubtedly be the "Wolverine," leaving Detroit at 3:40 p. m. This will connect with the night train on the Lehigh Valley, arriving in Philadelphia at 9:30 a. m. Dinner and breakfast may be had on the train or breakfast at the Reading terminal in Philadelphia. The subway in Philadelphia has been completed, making the trip across the city to the Chestnut Street Ferry an easy and rapid one. Atlantic City will be reached about noon. *Extra through sleepers will be run on the "Wolverine" Sunday.* Berths may be reserved by writing to Mr. Jos. S. Hall, Michigan Central Station, Detroit.

Stop-overs on all tickets may be arranged in Buffalo, Ithaca and Philadelphia.

One may also reach Philadelphia via Toledo and Pittsburg. The trip requires a change of cars at both cities.



**The family of Major James Carroll,** who rendered memorable service in the investigation of yellow fever and died from the result of this work, are in reduced circumstances; the Legislative Council of the American Medical Association has

appointed a committee to solicit contributions to the *Carroll fund* and it is earnestly requested that physicians give to such a worthy cause, no matter how small the donation may be. Make checks, drafts, etc., payable to Major M. W. Ireland and send to him at the office of the Surgeon-General, War Department, Washington, D. C. Acknowledgment will be made in the pages of the *Journal of the American Medical Association*.



Numerous responses to this appeal are coming in, both from individuals and from medical societies. It seems as if a most fitting and comprehensive method of solicitation is for the subject to be brought before the county medical societies, and collections made on the spot. Dollar subscriptions gathered in this way help greatly to swell the total of such a worthy fund, and make no severe tax upon any one. It is reported that some six or seven thousand dollars are needed to raise a mortgage. If it should prove difficult to obtain this sum, what a pitiful commentary it would be upon the relative appeal of prosperity and indigence. The well known New York surgeon, Dr. Andrew McCosh, who died recently, was financially successful; his New York colleagues, to express their esteem for him, have raised tens of thousands of dollars for a memorial. A similar movement is on foot in memory of Dr. William Bull, recently deceased. These men left their families in comfort, but expensive monuments are easily raised to their fame. Dr. James Carroll, a humble martyr, but illustrious in the annals of medical discovery, left a large family in straitened circumstances, deserving of rich assistance, and it is proving slow work to obtain help, even with a country-wide appeal.

## Book Notices

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**Diseases and Surgery of the Genito-Urinary System.** By Francis S. Watson, M. D., Senior Visiting Surgeon to the Boston City Hospital, Lecturer on Genito-Urinary Surgery in the Harvard Medical School, Boston, and John H. Cunningham, Jr., M. D., Assistant Visiting Surgeon to the Boston City Hospital, Member of the American Association of Genito-Urinary Surgeons. In two very handsome octavo volumes containing 1101 pages, with 454 engravings and 47 full-page colored plates, mostly from original drawings. Price for the complete work: Extra cloth, \$12.00, net; Half Persian Morocco, gilt tops, de luxe, \$17.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1908.

This work on genito-urinary surgery surpasses anything heretofore published, both in completeness and in general makeup. The two volumes are beautifully illustrated and the press work and binding are unexcelled. It is a *de luxe* edition.

Volume I, consisting of 627 pages, treats of the external genitals, bladder and prostate, while the second volume, somewhat smaller, contains matter relating to the kidneys and ureters. The general plan of the work is to describe the anatomy and various lesions of the different organs, reserving for separate chapters, the technic of the various operations. The author is liberal in his credit to other workers, but does not leave the reader in doubt as to his own preferences and methods. Among the many excellent chapters may be mentioned the very practical one on the treatment of urethritis, and the splendid differentiation of chancre and chancroid, splendidly illustrated by colored plates. The author advocates internal or combined urethrotomy for stricture, and favors perineal prostatectomy for hypertrophy. The section on the prostate is perhaps the best in the work. Cystoscopy is too meagerly discussed for a work of this importance.

The chapter on movable kidney is a sane exposition of the subject. Tumors of the kidney are exhaustively described. More space should have been given to the surgery of the ureter. Tuberculosis of all the organs is considered in one chapter.

The illustrations are excellent. Some might have been omitted, indeed 68 of them ought to have been, for it is today not necessary to show the reader a picture of a knife, scissors, dissecting forceps, sound, operating table, etc. Figure 110 is twice repeated. Most of the anatomical drawings are from Sobotta.

Taken as a whole, the work is to be highly recommended.

**Medical Inspection of Schools.** By Luther Halsey Gulick, M. D., Director of Physical Training New York Public Schools, and Leonard P. Ayres, General Superintendent of Schools of Porto Rico, 1906-1908. 6x9½ inches; pp. 276; cloth. Postpaid, \$1.00. Charities Publication Committee, 105 East 2nd St., New York City.

This is the second volume published by the United Charities of New York and is made possible by the endowment of the Russell Sage Foundation. The first was a general directory of tuberculosis work and was recently reviewed in these columns.

This book contains a very large amount of information on the subject of medical inspection of schools. The movement for such inspection has progressed very rapidly and has become world wide, yet sources of definite information concerning it have, until the present work, been few and scattered. Few realize that it has become a national institution in England, France, Belgium, Sweden, Switzerland, Japan, Argentine Republic, and practically so in Germany. Massachusetts has a compulsory medical inspection law, New Jersey a permissive one, Vermont a law requiring the annual testing of the vision and hearing of all school children, and Connecticut one providing such tests triennially.

The historical, medical, educational, administrative and legal phases of the work are all elaborately set forth. There is added the most extensive bibliography on the subject yet compiled. Educators, physicians, social workers, and all who are concerned for the welfare of children will find in it much of value and interest.

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**Epoch-Making Contributions to Medicine, Surgery, and the Allied Sciences;** being reprints of those communications which first conveyed Epoch-Making observations to the scientific world, together with biographical sketches of the observers. Collected by C. M. B. Camac, M.D., of New York City. Octavo of 435 pages, with portraits. W. B. Saunders Company, 1909. Artistically bound, \$4.00 net.

The compiler of this work, who is one of the most scholarly of the younger teachers in medicine, has been in the habit of presenting to his students certain masterpieces of scientific research which time has proven to be classical. The object he had in view in preparing this book is to place these masterpieces within ready reach of the teacher and student.

The masterpieces selected are: Lister's "On the Antiseptic Principle and the Practice of Surgery"; Harvey's "An Anatomical Disquisition on the Motion of the Heart and Blood in Animals";

"Auenbrugger's "On Percussion of the Chest"; Laennec's "A Treatise on the Diseases of the Chest and on Mediate Auscultation"; three articles by Jenner on "Variolae Vaccinae"; four articles on anesthesia by Morton, Warren and Simpson; and "The Contagiousness of Puerperal Fever" by Holmes.

These seven sections include, besides the text of the original paper, a biography of the master, a list of his writings, explanatory notes, autograph letters, etc. Excellent portraits are also inserted. The general makeup of the book is most attractive.

The idea is a happy one and the profession is indebted to the compiler and publishers for carrying it out so well.

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#### ALUMNI CLINIC WEEK. Detroit College of Medicine.

The annual clinic week of the Detroit College Alumni will begin on Wednesday, May 19th, and will continue until Thursday, May 27th. Clinics and lectures will be given daily, by members of the faculty, beginning at 9 a. m. and ending at 6 p. m.

The following distinguished men will be present:

May 19th, Dr. Lewis McMurdy, Louisville, gynecological clinic at Harper.

May 20th, Dr. R. C. Cabot, Boston, clinic on the heart, at Harper.

May 21st, Dr. Bransford Lewis, St. Louis, cystoscopy and ureteral catheterization, at St. Mary's.

May 22nd, Dr. B. C. Hirst, Philadelphia, obstetrical clinic at St. Mary's.

May 24th, Dr. Geo. W. McCaskey, Fort Wayne, psycho-therapeutic clinic at St. Mary's.

May 25th, Dr. Alexander McPhedran, Toronto, clinic on Hodgkin's Disease and neurology at Harper.

May 26th, Dr. Christopher Graham, Rochester, Minn., clinic on diseases of the biliary tract and pancreas at St. Mary's.

May 27th, Dr. John Y. Brown, St. Louis, clinic on herniotomy and salpingectomy at Harper.

On Friday, May 21st, a special car on the Inter-urban will carry the guests to the Wayne County Asylum, where a clinic on the relation of the thyroid to mental conditions will be given by Drs. Marker, Inglis and Ives, to be followed by



a complimentary luncheon. At 2 p. m. Tuesday, May 25th, a special demonstration on the recent advances in laboratory and research methods will be given by the Staff of the Biological Laboratory of Parke, Davis & Company, to be followed by a boat ride and dinner at the Star Island House, the alumni being the guests of Dr. S. G. Miner. Class reunions of 1869, '74, '79, '84, '89, '94, '99 and 1904 will take place on Wednesday evening, May 26th. The alumni luncheon will be served at Harmonie Hall at 1:30 on Thursday, May 27th, followed by the annual meeting. In the evening the commencement exercises of the class of 1909 will take place at the Light Guard Armory and the annual banquet at the Cadillac. At the meeting of the Wayne County Medical Society on Monday evening, May 24th, Dr. George W. McCaskey, of Fort Wayne, will read a paper on Intestinal Tuberculosis. A smoker will be held Saturday evening, May 22nd, at Harmonie Hall.

It is difficult to conceive of a week's program more replete with enjoyable and highly instructive events than the one planned for this year, and the committee having it in charge should be rewarded by the largest registration in the history of alumni week celebrations.

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## County Society News

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### First District.

The fifth annual meeting of the First Councilor District was held at the Hotel Tuller, Detroit, Thursday, April 22nd. In the afternoon the scientific program was carried out, with Dr. W. P. Manton, President of the Wayne County Medical Society, in the chair.

Dr. C. D. Camp, of Ann Arbor, read a paper on the "Causes and Treatment of Trifacial Neuralgia"; Dr. R. B. Canfield, of Ann Arbor, one on "Chronic Suppuration of the Nasal Accessory Sinuses"; and Dr. Don M. Campbell one on "The Removal of Foreign Bodies From the Eye." The subject of Dr. Frank B. Walker's paper was "Gunshot Wounds in Civil Practice." Dr. H. W. Yates made "A Plea for Early, Frequent and Thorough Examinations of Pregnant Women," and Dr. James E. Davis discussed "Nutrition in Critical Physiological Periods." Papers by Dr.

I. L. Polozker on "Fevers in Infancy and Childhood," and by Dr. A. P. Biddle on "Parasyphilis: Prophylaxis: Its Amelioration," completed the program.

At 6:30 a very enjoyable dinner was served, at which 53 sat down. Dr. L. J. Hirschman, Councilor of the First District, acting as toastmaster, introduced Dr. W. P. Manton, who extended a welcome on behalf of the Wayne County Society. "A Boy from the Woods" was the title of a toast by Dr. L. G. North, of Tecumseh. "The Physician as a Business Man" was discussed in a very practical manner by Dr. David Inglis. Dr. William F. Breakey spoke on "Medical Pendulums" and Dr. Leartus Connor on "The Physician and His Social Life."

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### Second District.

The Second Councilor District, comprising Hillsdale, Ingham and Jackson Counties, held its annual meeting in the council rooms of the City Hall in Lansing on the afternoon of April 22nd. The district officers having the meeting in charge were: President, N. H. Williams, Jackson; vice-president, B. F. Green, Hillsdale; secretary, Samuel Osborn, Lansing. The local committee on arrangements comprised C. H. Brucker, L. W. Toles and S. Osborn.

The program arranged was:—

- I. Business Meeting and Election of Officers.
- II. Address of President, Dr. N. H. Williams, Jackson.
- III. Remarks by District Councilor, Dr. A. E. Bulson, Jackson.
- IV. Paper—The Bacteriology of Diphtheria, Dr. M. L. Holm, State Bacteriologist, Lansing.
- V. Paper—Recent Experiences in the Diagnosis of Retroperitoneal Tumors, Prof. Albion W. Hewlett, Ann Arbor.
- VI. Paper—The Pure Food Movement and the Progress of Food Chemistry, Mr. Floyd Robinson, State Analyst Dairy and Food Department, Lansing.
- VII. Paper—Oesophageal Stricture, Dr. W. H. Enders, Jackson.

A dinner was tendered the visiting physicians by the members resident in Lansing, at the Hotel Downey, after the meeting. The attendance at the meeting was 35.

The newly-elected officers are: President, J. F. Campbell, Lansing; vice-president, C. H. Lewis,

Jackson; secretary, Samuel Osborn, Lansing.

The occasion was thoroughly enjoyed by all who were present.

SAMUEL OSBORN, *Secretary*.

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### Ingham.

The Physicians' Clinical Club has completed its work for the year. The meeting on April 6th was a gathering of the physicians and druggists, and one of the leading pharmacists, Frank L. Gardner, read a paper on the "Relations of Druggist and Physician." This was followed by a free discussion and all agreed that the meeting was a successful and valuable one. It was the opinion of all that a similar meeting should be planned for the near future.

SAMUEL OSBORN, *Secretary*.

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### Ionia.

Owing to bad weather and much business, the attendance at the April meeting of the Ionia County Medical Society was not up to the average.

Dr. Pinkham being unavoidably absent, the time of the society was taken up with the reading of the second number on the program. This proved to be so interesting that the wish, that this paper might be preserved until there was a full attendance, was expressed by all present.

Under the head of new business it was resolved that inasmuch as Local Option had prevailed in the county, the physicians of the County Medical Society would not write prescriptions for liquors as a beverage.

On Tuesday evening, April 13th, a special meeting of the society was called to meet at the office of the president, Dr. E. F. Beckwith, at which the following resolutions were unanimously carried:—

Be it resolved, That the Ionia County Medical Society disapproves of the action of the Michigan House of Representatives in passing the Optometry or Giles Bill, and that we urge our Senator, the Honorable Wm. Bradley, to use all honorable means to prevent its further passage, as we consider it inimical to the best interests of the people of the state.

C. S. COPE, *Secretary*.

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### Kalamazoo Academy.

The regular monthly meeting of the Academy

was held April 14th, and the following program given:—"Diagnosis and Treatment of Stomach Diseases from a Surgical and Medical Aspect," Dr. G. W. McCaskey and Dr. M. F. Porter, both of Fort Wayne, Ind. "X-Ray Evidence in Gastric Ulcer," Dr. A. W. Crane, Kalamazoo. Dr. Thaddeus H. Ames, Dr. E. D. Brooks and Dr. Ward E. Collins, all of Kalamazoo, were elected to membership.

G. F. INCH, *Secretary*.

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### Kent.

Dr. Frederick W. Robbins, of Detroit, appeared before the society at its regular meeting on March 24th and read an extremely interesting paper entitled "The Prognosis and Treatment of Certain Prostatic Diseases." Dr. Robbins was the guest of honor at a dinner given to twelve local physicians at the Pantlind Hotel before the meeting. Dr. W. T. Dodge, of Big Rapids, who was on his way to Chicago, was also a guest at the dinner and also attended the meeting.

On April 14th, Dr. C. G. Darling, of Ann Arbor was the invited essayist of the evening and read a paper on "Suppurative Parotitis as a Complication in Surgery." At the close of this meeting the members adjourned to the Pantlind Hotel and enjoyed an informal smoker. The menu was rendered more enjoyable by impromptu speeches, stories and reminiscences. Our Social Committee has promised a similar entertainment in the near future.

The pure milk contest will be held in this city on May 14th, under the auspices of the Pure Milk Commission of this society and the Public Health Committee of the local Board of Trade.

F. C. WARNSHUIS, *Secretary*.

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### Saginaw.

The officers of the Saginaw County Medical Society for the coming year are F. W. Edelmann, president, and J. Neil MacLean, secretary-treasurer.

J. N. MACLEAN, *Secretary*.

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### Tuscola.

The last meeting of the Tuscola County Medical Society was held at Hotel Montague, Caro, and was well attended. Drs. Peterson from Ann

Arbor and MacMillan from Detroit gave interesting papers. The next meeting is to be held at Cass City the second Monday in June, and a "regular revival" is being planned.

M. M. WICKWARE, *Secretary*.

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## News

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The Saginaw General Hospital has received a bequest of \$25,000.00 by the will of the late Charles A. Rust.

A hospital has been opened at Three Rivers in the Sage Building, by Dr. Guy L. Bliss.

A new hospital is to be erected by Dr. E. I. Lindgren in Marquette, accommodating 25 to 50 patients.

The publication of the *Archives of Otology* ceased with the issue of December, 1908, completing the 37th volume.

The Delta County Antituberculosis Society was recently organized at Escanaba, with Dr. J. Charles Girard as president and Dr. Oscar C. Breitenbach as secretary.

Dr. David J. Levy, secretary of the Kalamazoo Board of Health, has resigned.

Dr. J. B. Kennedy, Detroit, has returned from a trip to Mexico and the southwest.

An effort will be made to conduct a vigorous spring campaign against tuberculosis in Detroit, and an organization committee meeting was held for that purpose was held in the Hotel Pontchartrain recently. The following educational committees were appointed: Schools and playgrounds, Mrs. Guy L. Kiefer, Mrs. H. E. Safford, Mrs. H. H. Kenny, Mrs. C. C. Morrison, Mrs. Willard E. Warner; factories, Mrs. Antonio Pesano, Mrs. George Kerwin, Mrs. H. B. Lewis; dispensary, Mrs. W. R. Chittick, Mrs. Emma Edwards; public meetings, Mrs. Lee S. McColester, Dr. Mary Thompson Stevens; publicity, Mrs. E. D. Stair, Mrs. Sara Moore, Miss Gahagan, F. S. Cooke, Louis Ling.

The Harvard Summer School has secured reduced fares for students coming from a distance over the Eastern Canadian, the New England, and the Trunk Line Passenger Association's routes. A fare and three-fifths is obtainable, on

the certificate plan, provided one complies with certain stipulated conditions. These rates apply also to students desiring to take medical courses.

It is reported that President Taft has requested Surgeon-General Wyman to draw up a scheme for the consolidation under one bureau of all the agencies exercised by the Federal Government for the Preservation of the Public Health. The President is much interested in this question and will probably make some recommendation in his next message to Congress.

The Chicago Board of Education has decided to name the new high school on the north side the Nicholas Senn High School.

The Medical College of Ohio and the Miami Medical College, both of Cincinnati, are to be merged.

Major James Evelyn Pilcher, U. S. A., has retired from the editorship of the *Military Surgeon*. Major Pilcher has held the position for many years, but it now obliged to resign on account of ill health. He will be succeeded by Major Charles Lynch.

The following delegates from the Wayne County Medical Society to the State Society were elected in January:—

Regular.	Alternate.
V. C. Vaughan, Jr.	G. W. McKean
A. D. Holmes	P. J. Livingstone
B. R. Shurly	R. E. Mercer
F. W. Robbins	M. V. Meddaugh
A. P. Biddle	F. B. Walker
C. W. Hitchcock	L. Connor
W. Warren	R. Hislop
F. B. Tibbals	F. D. Summers

Dr. G. W. Lowry, Hastings, has recovered from a serious attack of septicemia, due to an operation wound.

Dr. N. F. McClinton was recently elected mayor of Alma on the Democratic ticket.

The perjury case against Dr. George A. Fritch, recently started in connection with a death certificate for a fraternal order, has been dismissed for lack of evidence.

Miss Christina G. Macomb, great-grandniece of Gen. Alexander Macomb, and formerly matron of St. Luke's Hospital, Detroit, died April 4, after a long illness.



Dr. A. Adlington Newman, Detroit, has returned from a trip to Jamaica.

Dr. Wilfred T. Grenfell, medical missionary in Labrador, recently gave addresses in Detroit.

The Pennsylvania Avenue Sanitorium in Detroit has been leased by Dr. H. A. Luce and will be conducted on modern lines for the benefit of the profession.

The State Health Department at Lansing will provide pamphlets of instruction on tuberculosis, diphtheria, and typhoid fever, written in German, Swedish, and Polish. It is hoped that these will receive a wide distribution and of course the medical profession must be the intermediate agents. The pamphlets will be sent to any address by Dr. F. N. Shumway, secretary of the State Board of Health.

Drs. Davis, Yates, Polozker, Mercer, Beattie, and Ives, of Detroit, have taken new offices in the Gas Office Building, which is proving an attractive location for physicians.

An examination by the State Board of Medical Registration will be held at Harmonie Hall, Detroit, May 24, 25 and 26. Application must be made at least a week in advance. For the first time candidates will be required to answer questions upon and take a practical examination in refraction.

Mrs. Caroline Bartlett Crane, of Kalamazoo, will lecture in twelve different cities in Kentucky during May under the auspices of the State Board of Health.

Largely through the efforts of Dr. C. D. Morris, medical inspection of the school children of Pontiac has been ordered by the School Board. Detroit, Grand Rapids, Lansing and Ann Arbor are the other cities of the state having school inspection.

The commencement exercises of the Farrand Training School for Nurses, Harper Hospital, were held at the First Presbyterian Church, Detroit, Tuesday evening, April 27, 1909.

At the coming meeting of the American Medical Editors' Association to be held in Atlantic City, June 5th to 7th, the 40th anniversary of the association will be celebrated. It is expected that delegates from the foreign medical press will be present and a program of unusual interest has been prepared.

There is a movement on foot to provide a

pension from the funds of the American Medical Association, to aid Dr. W. B. Atkinson, a former secretary, who is living at an advanced age in comparative poverty.

Dr. V. W. Shirley, a member of the state society and last year president of the Presque Isle County Medical Society, was elected mayor of the City of Onoway, at the recent election.

Dr. J. M. Sattler, of Manistique, left recently for Denver, Col., to spend a few months on his farm and fruit ranch at University Park.

Dr. G. M. Livingston, of Manistique, has been appointed examining surgeon on the Pension Board of Schoolcraft County, to succeed the late Dr. Omer C. Bowen.

Dr. John R. Foote, formerly of Novesta, has located in Thompson.

At the meeting of the Senn Club, held in Chicago March 26th, it was decided to perpetuate the memory of Nicholas Senn and to bring before the public, lay and professional, the valuable services rendered by Dr. Senn. The means to be employed for this purpose will be decided on later. Dr. Alex. Hugh Ferguson was unanimously elected president of the club, and Dr. Arthur MacNeal was re-elected secretary.

Dr. Joseph Sill has been appointed pathologist and Dr. C. S. Oakman anesthetist to Harper Hospital, Detroit.

On Wednesday evening, March 31, the Ann Arbor Medical Club and the Washtenaw County Medical Society tendered a banquet at the Michigan Union Club House in Ann Arbor to William Fleming Breakey, in honor of his fiftieth year in the practice of medicine. Dr. Breakey is now clinical professor of dermatology and syphilology in the University Medical Department. Dr. V. C. Vaughan acted as toastmaster and the following toasts were arranged:—"Teacher," James B. Angell; "Friend," Theodore McGraw; "Classmate," James C. Willson; "Dermatologist," M. L. Heidingsfeld; "Executive," Junius E. Beal; "Soldier," Henry S. Dean; "1859-1909," William F. Breakey. About 75 were in attendance.

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## Marriages

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Harry Hugh Ellis, M. D., Charlotte, to Miss Marie Rowland Van Vert, Detroit, March 18.

William G. Hastie, M. D., to Mrs. Sadie A. Stewart, both of Detroit, November 31, 1908.

## Deaths

Dr. J. M. Rankin, of Kalamazoo, for many years a member of the Kalamazoo Academy of Medicine and of the State Society, died at his home, March 28th, aged 76 years.

Dr. C. W. Huff, of Goblesville, died at his home on March 31st. Dr. Huff was born in Luzerne county, Pennsylvania, attended the state normal school at Bloomsburg, Pa., a business college at Kingston, Pa., taught school for five years, attended the University of Pennsylvania at Philadelphia, graduating in 1874. He immediately began the practice of medicine. In 1879 he moved to Kendall, Mich., and in 1890 to Goblesville. Dr. Huff was a member of the Kalamazoo Academy of Medicine and had been one of the United States pension examining surgeons for that district ten years. He was also president of the Board of Trustees of Goblesville for many years.

Dr. William Hyser, formerly a member of the Kent County Medical Society, died at his home on March 20th, at the age of 83 years. Dr. Hyser was born September 11, 1826, in Herkimer county, New York; graduated at the University of Buffalo in 1850, and located at once in Kent county, Michigan. He served as surgeon in Company F, 5th Michigan Cavalry during the Civil War and was discharged in July, 1863, after which he again resumed practice in Kent county.

J. Walton Pennock, M. D., died at his home in Gladstone, March 12, from paralysis, aged 69.

John Patterson Wilson, M. D., health officer of Pontiac and a member of the school board for fifteen years, died at his home in Pontiac March 26, aged 80.

Alonzo Bryan, M. D., of Detroit, died recently from gangrene and paralysis, at his home, aged 69.

Willard Southard Whitney, M. D., a pioneer practitioner of Big Rapids, died in Pontiac, from senile debility, April 2, aged 90.

Albert E. Luton, M. D., a well-known physician of Grand Rapids, died at his home recently, after an illness of two months, aged 57.

Dr. Bradley Crippen, of Coldwater, died at his home March 17, aged 48.

## ERYSIPELAS.

Judd describes the local use of carbolic acid and alcohol in erysipelas and refers to the multiplicity of remedies advised. About eight years ago he began to treat all cases of erysipelas by the method to be described. Since then he has seldom failed to secure a satisfactory result and has discarded all other remedies in these cases. He has treated 82 patients with five failures, 10 delayed recoveries and 67 complete remissions of symptoms in from 12 hours to four days. These cases have included not only the beginning stages of facial and other forms of erysipelas, but those in the advanced stages in which the area involved has varied from the face only, to the face and scalp and with marked general septic symptoms. Almost the first result noticed by the patient is a complete cessation of the unendurable itching, burning and throbbing. Usually within a few hours, nausea subsides, the temperature sinks to normal, the appetite returns, the pulse very rapidly falls. The technic consists of swabbing with 95% carbolic solution the entire surface of the involved area and about a half inch of the surrounding apparently healthy skin. This is left until the purplish color of the inflamed area is replaced by a pretty complete whitening of the skin. It is essential to the success of the procedure that we await this whitening before proceeding to the next step in the operation. On the other hand, if we allow the whitening to proceed to a thorough blanching we shall produce a burn and a slough of the skin, which will prove painful to our patient and add nothing to the efficiency of the treatment. When large areas are involved it is advisable that only a portion be painted at a time. The second step consists in going over the whitened area very thoroughly with a swab saturated with pure alcohol. If this is done thoroughly the whitened area becomes once more pink and the alcohol must be applied until this is accomplished. After this we proceed with other areas, first using the carbolic and then neutralizing with alcohol until our operation is complete. It is essential that we should include a half inch of the apparently sound skin as the bacteria of erysipelas are found beyond the apparently involved area. If the treatment is properly carried out no scarring results.—*Medical Record*, Feb'y 3, 1909.

## Progress of Medical Science

### SURGERY.

Conducted by

C. S. OAKMAN, M. D.

#### The Rational Treatment of Non-Malignant and Border-Line Tumors of the Breast.

GIBSON thinks that many physicians are attracted too strongly by non-surgical cures for cancer, especially in these days of trypsin, serum-therapy, etc. No means has as yet been discovered equal to early operative removal, and this should remain the prime resource until a better one is found and proved. Neoplasms of the breast should be regarded as malignant till proven otherwise. Over eighty per cent of breast tumors are cancer, and a large proportion of the remainder are sarcoma, or "pre-malignant" conditions. In short, there is about one chance in ten that a mammary neoplasm is benign. We are not interested in the *obvious* cases of cancer, because when the diagnosis is positive, the patient is too apt to be already doomed. It is the doubtful cases that ought to be our chief concern, for those that pass as mastitis, adenoma, and cysts, without operative intervention, are the ones that will later turn out to have been, in a certain per cent, carcinomatous, or will develop malignancy in time. No one is qualified to pronounce any breast tumor absolutely benign, and even the discovery of fluid with the aspirating needle gives a false sense of security.

In brief, then, any breast tumor may be cancerous or may become so, and it is wrong to assure any patient that such a growth is safe to leave alone. The full duty of the surgeon is, *first*, to know what are borderline cases, *second*, to know how to make a diagnosis, and *third*, to know the appropriate advice. The border-line cases are in women of thirty; under thirty, a tumor is presumably innocent, if there is no glandular involvement and no history of rapid growth. In cases over thirty, a definite diagnosis must be made.

The diagnosis can be made with certainty only by removal of a sufficient portion for microscopic examination. The determination of what amount is *sufficient* is subject to error, as many cases have occurred where small pieces removed

showed no malignancy, although it existed elsewhere in the growth. Therefore, the author urgently recommends that every case of breast tumor in an individual over thirty be subjected to "*plastic resection*," as done by Dr. J. Collins Warren. According to this method a considerable growth can be removed with very little resultant deformity and an almost invisible scar. The chief factors in the cosmetic success of the operation are in making a semi-circular incision corresponding to the lower border of the breast, and in reconstructing the tissues that are left after resection by appropriate buried sutures. By such methods, uniformly practiced, one can be quite sure of the microscopical diagnosis; if the growth is benign, the feeling of security is absolute; if it is malignant, extensive and radical operation can be done at once. It is the surest means yet known towards the prophylaxis of cancer.—*Annals of Surgery*, April, 1909.

#### The Value of Enterostomy in Intestinal Obstruction.

LORD quotes statistics of operative mortality in intestinal obstruction, showing that cases average considerably less than 50 per cent of recoveries. It is a fact that the majority of these cases are seen so late that prolonged or extensive surgical intervention is very dangerous. The anesthetic itself contributes much to shock when the emunctories are so inhibited. Therefore the indications are to relieve the obstruction in the best and shortest way possible, without attempting resection, anastomosis, or plastic work. The author believes that enterostomy is the operation of choice, according to the method of E. J. Senn or Kader. It reduces the great dangers that existed in older methods of enterostomy, such as peritoneal soiling, skin excoriation, inanition, and secondary operation for closure. It is possible and usually advisable to do the operation under local anesthesia.—*Surgery, Gynecology and Obstetrics*, April, 1909.



PATHOLOGY AND BACTERIOLOGY.

Conducted by

C. E. SIMPSON, M. D.

**The Value of the Leucocyte and Differential Counts in Appendicitis.**—PEASE tabulates the blood findings in 300 cases of appendicitis. Although it is impossible to decide from the blood count alone what pathological condition is present or even whether the case is severe or not, the writer believes the blood findings afford very valuable evidence, which must of course be interpreted in connection with the other data.

The cases reported are classified as chronic, simple acute, acute gangrenous, appendicitis with abscess formation, appendicitis with local peritonitis, appendicitis with general peritonitis. In the majority of instances the more severe the pathological lesion the higher the percentage of polynuclear cells. There are, however, important exceptions to this rule, as in some cases of general peritonitis where the absolute and differential counts were both low, probably on account of the sudden overwhelming of the resisting powers by a particularly virulent infection. PEASE believes that in the majority of cases a leucocyte count of over 15,000 denotes a severe case and under 15,000 a mild one, but this is not to be taken as an absolute rule. We can, however, judge more accurately of the pathological condition from the polynuclear count than from the total leucocyte count.

The average counts in the cases reported are as follows:

Variety.	Per cent. Polynuclears.	Number of Leucocytes.
Chronic .....	69%	12,900
Simple acute .....	77%	14,700
Gangrenous .....	85%	19,400
With abscess .....	88%	22,200
With local or spreading peritonitis .....	88%	21,100
With general peritonitis..	89%	21,800

It is to be noted that practically two-thirds of all the more severe cases show a polynuclear count of over 85 per cent. Cases with over 90 per cent are cases with a more or less extensive peritonitis. From the blood counts then we might conclude—

1. A polynuclear count between 85 and 90 per cent. indicates the presence of a severe process.
2. Above 90 per cent a dangerous condition, probably complicated by peritonitis.

3. Below 80 per cent safety for the time being.

4. Between 80 and 85 per cent, doubt.

5. These rules hold good for about four-fifths of this series of cases, there being many exceptions to each rule. As previously stated, the writer believes that a more reliable opinion of the pathological condition is to be obtained from the differential leucocyte count than from the absolute count. This is also more reliable than the method suggested by some writers, the relation between the total increase of leucocytes and the polynuclear increase.—*Annals of Surgery*, xlix, 385.

**The Presence of Tubercle Bacilli in the Circulating Blood in Tuberculosis.**—From previous studies of feces and the contents of thoracic ducts ROSENBERGER obtained the idea that all forms of tuberculosis are characterized by a bacteriemia. Accordingly, following the technic here described, he examined the blood of 125 cases.

By means of a sterile syringe about 5 cc. of blood are withdrawn from a vein of the patient's arm and immediately placed in an equal quantity of a 2 per cent solution of sodium citrate in normal salt solution. Shake and set in a refrigerator for 24 hours. At the end of this time there is an abundant sediment. This is removed by a pipette, placed on a slide, dried by heat and placed in distilled water until complete laking of blood results. The slide is then fixed and stained in the usual manner for tubercle bacilli.

Cases of acute miliary tuberculosis, fibroid tuberculosis, pneumothorax, incipient, advanced and laryngeal tuberculosis were examined, all showing tubercle bacilli, usually in large numbers. ROSENBERGER concludes that tuberculosis in all its forms is a bacteriemia and holds that the examination of the blood in the manner described may show the presence of the bacilli before the disease is otherwise demonstrable.—*American Journal of Medical Sciences*, cxxxvii, 267.

Commenting on the above editorially, the *Medical Record* suggests the possibility of Dr. Rosenberger's having mistaken artefacts and shadows of red blood cells for tubercle bacilli. His procedures have been tried by two large hospitals in New York with uniformly unsuccessful results. The question raised is an interesting one, but further work is necessary before positive statements are warranted.

# NEUROLOGY.

Conducted by

C. W. HITCHCOCK, M. D.

## Insomnia: Its Pathogenesis and Treatment.

—Sleep is a nervous phenomenon. Various views have been expressed as to whether it has an anatomical basis. The majority have favored the view that during sleep the brain is in a state of anaemia. Although a histological difference in the appearance of the fatigued and the rested nerve cell has been demonstrated, the cause of sleep does not yet rest upon definite anatomic basis. Theories of a chemical basis, a toxic cause, and that of a sleep center, as also that sleep is a reflex act, an instinct,—all are equally lacking in positive confirmation. Sleep may be normal or pathological. Disturbances of sleep are the pathological conditions most commonly confronted.

Insomnia, whether it be total or partial, in view of the little understood cause of normal sleep, must be equally vague as to its pathology. Emotional disturbances, intense mental concentration, atmospheric conditions are known to have some causal relations, while the idiosyncrasy of the personal equation can never be wholly eliminated. Injuries and other painful conditions, malnutrition from whatever cause, gastric conditions, cardiac disturbances, renal affections, various disordered states of the blood, arthritis, gout, diabetes, are all possible factors in disturbed sleep.

Insomnia is probably most frequently associated with nervous diseases. Cerebral tumors, syphilis, meningitis, hemorrhage, softening, and arterio-sclerosis of the brain may any of them contribute to derange sleep. Here, the disorganized sleep may be due to disturbed circulatory conditions, and the sensitive meninges (supplied by sensory filaments from the fifth nerve) are naturally distended in conditions of meningitis.

Cord diseases which affect sleep are commonly those invading the upper part of the cerebro-spinal axis. Functional diseases afford the most numerous cases of sleeplessness—hysteria, neurasthenia, hypochondria,—and here it is not infrequently the chief complaint and these patients often establish a self-made diagnosis of the most serious organic conditions. Mosso and Fere have pointed out that in normal individuals fatigue increases emotionality, which would still more obtain in the neurasthenic.

In the insanities absence of sleep is most common. Toxic conditions produce delirium tremens, delirium grave, or mania with its exalted emotional state; dementia precox, with its hallucinatory condition, senile dementia, with its diseased arteries and deteriorated cerebration, all afford frequent examples of sleep, pathologically absent, due largely to varying conditions of circulation and blood-pressure.

Before recourse to drugs, other means must first be tried. Heavy meals at night are inadvisable for the patient of disturbed sleep. Milk and eggs in small quantities are better than a heavier meal. A very small amount of meat at the mid-day meal is also advised. Small meals, avoiding large amounts of waste matter, are to be insisted upon. Sweets and stimulants are to be avoided, tobacco reduced to a minimum, or even abandoned. Constipation is to be remedied.

Hydrotherapy is a helpful adjunct. A lukewarm bath before retiring, a half-minute shower-bath, warm or cold, a one-minute tepid pack, are means sometimes efficient in producing sleep. A cold wet towel placed on the neck in bed, or the feet and ankles kept for fifteen minutes in hot water are means not to be neglected.

Very difficult of treatment are the causes due to sorrow or mental preoccupation. Psychic measures may avail to some extent. Here sodium or strontium bromide gr. x, veronal gr. v, with or without codeine gr.  $\frac{1}{8}$ , repeated if needful, or appropriate doses of trional or sulfonal may accomplish the desired end.

In the insomnia due to pain, those remedies which quiet pain, whether chemical or hydrotherapeutic, will accomplish most.

Where malnutrition is the cause, measures dietetic and hygienic will of course avail most if faithfully pursued. In the case of cardiac or pulmonary troubles gentle massage and tepid sponge baths are to be preferred to drugs. In the infectious diseases, the insomnia is often due to fever, which of course must be reduced. Ice-caps, cool spongings or full baths, when possible, are suggestive measures.

In the headaches (and resulting insomnia) of syphilis, vigorous mercurialization will soonest bring efficient relief. In arterio-sclerosis, vasodilators are indicated. Energetic measures, hygienic, hydrotherapeutic, suggestive, are to be resorted to in the cases of hysterical origin.

Besides veronal (with or without codeine), trional, sulphonal, chloral, paraldehyde, chloral-amide, opium, or morphine, hyoscine, scopolamine are recommended as available hypnotics. Chloral combined with morphine is especially efficient in delirium tremens. Paraldehyde and opium are to be avoided because of the frequent necessity of repetition.

Careful search for the cause of the condition precedes any rational or scientific treatment. Physiologic and psychic measures are not to be neglected, and drugs are to be reserved for extreme and difficult cases. (*Alfred Gordon in Therapeutic Gazette*, Feb. 15th, 1909.)

## LARYNGOLOGY.

Conducted by

J. E. GLEASON, M. D.

**Radical Frontal Sinus Operations.**—HAJEK reports two operative frontal sinus cases which resulted fatally. The first case, a man 35 years old, had been operated previously, a suppurating fistula remaining over the left brow. The right frontal sinus was apparently normal, both intranasal and X-ray examinations being negative. The radical Killian operation was done on the left side. The anterior wall of the sinus had been removed previously, but there was found a deep orbital recess which still suppurated. The fifth day after operation the patient complained of severe headache on the right side. A swelling appeared over the right eye-lid and chemosis of the bulbar conjunctiva. Temperature 37.5 C. The swelling increased during the next five days, the presence of phlegmon of the orbit, arising from the infection from sutures of the wound, becoming evident. An incision extending across both eyebrows was made, liberating pus. The exposed wall of the right frontal sinus showed no suspicious spots. Although the temperature remained about normal, the general condition grew worse and the patient complained of severe headache in the right frontal and posterior region. The patient reacted slowly to questions, left-sided paraplegia and facial paresis developed. The sixteenth day after the first operation, the right frontal sinus was opened and found to contain pus. The posterior wall, although normal in appearance, was removed, exposing a stretched, non-pulsating, projecting dura. The bone was further removed and externally to the sinus an extra-dural abscess was exposed, whose origin was evidently from the orbital phlegmon. The dura was also opened and an intradural abscess drained. The patient, however, died the next day. The interesting points in this case are the complications of deep orbital phlegmon leading to brain complications and the overlooking of the right frontal empyema.

The second case was a man fifty years old with severe symptoms of an antrum and frontal infection; local intranasal treatment failed to drain the frontal sinus. Simple trephining was performed and the cavity washed for six weeks. Suppuration continuing, and examination through

a speculum showing granulations, the radical operation was done. The cavity was very large, with thin bony walls. Drainage was inserted at both extremities of the eyebrow. Symptoms of meningitis were present on the second day, the stitches were removed, but nothing found abnormal. Exitus on the third day from meningitis.

These two cases represent the types of fatal cases after frontal sinus operations. According to Gerber such cases have within the last few years reached the number of 36, many others of course unreported. Doubtless we will succeed in time in preventing these complications. Unfortunately many reports of fatal cases fail to state to what especial cause the lethal complications were to be laid. As far as these two cases are concerned, the first must be looked upon as an unfortunate wound infection. Much more obscure is the second case, the operation of which represented a typical surgical procedure and was technically extraordinarily smooth and yet resulted in a fatal termination very quickly. As a supposition only, judging from this case, it might be indicated to refrain from a too thorough curettage of the roof of the ethmoid, even with the alternative of leaving behind a little thickened mucous membrane. The too frequent occurrence of death after operation shows that the radical operation of the frontal sinus is not to be considered an entirely harmless interference, and that until the danger can be excluded completely, we should use the radical operation only on the strongest provocation. The serious cases with bone disease, fistula openings, with impending orbital or cerebral complications should be treated in this way. The great majority of uncomplicated chronic frontal empyemas will after intranasal treatment be so far benefitted that distressing symptoms cease. In these cases the radical operation should not be considered unless the headache and suppuration continue unabated. Intranasally improved cases, even if not entirely healed, are not to be operated radically for a long time. The danger of cerebral complications in these cases is a forbidding one.—*Proceedings Vienna Laryngological Society*, January 13th, 1909.



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## Original Articles

### BURNS OF THE EYE AND ITS APPENDAGES

V. A. CHAPMAN, M. D.,  
Muskegon.

The meagerness of details as given in most text books on this subject is discouraging to one in search of real help. Possibly I have been unfortunate in the selection of text books to which I have from time to time gone for information. Most of them have been satisfied to treat the subject in a general way, finally leaving the reader very much in doubt as to the real thing to do in his particular case. The imperative need of prompt and accurate treatment as soon after injury as possible makes it necessary that the attending physician must know what to do in each particular case *at once*. The specific reason for this imperative need of immediate treatment varies according to the nature of the agent which has caused the burn. But the general reason is the same in all cases—namely to stop the destructive process as soon as possible, and aid in the recuperation of such injured tissues as have not already been totally destroyed, which, if not aided soon, would lose enough of their vitality to pass beyond recovery. A slight variation either way in eye structures may mean the loss or preservation of vision.

The eye is subject to burns by the same external agents that attack other

portions of the body. These may be actual fire in some form, extreme heat, or chemical agents.

The eye is peculiarly susceptible to great injury from slight burns on account of its delicate mechanical construction. On the other hand it is protected in a measure by its automatic sprinkler system, so to speak. There is always present beneath the eyelids and over the surface of the exposed globe a certain amount of lachrymal fluid which almost immediately copiously increases upon any irritation of the eye. This reduces to some extent the virulence of burning agents in most cases, by cooling, if it be the actual cautery, or by dilution, if it be chemical cautery. Curiously enough this same source of protection may become an added source of danger. Notably in burns of the eye by unslacked lime. This agent, dry, would cause but little harm. But when constantly moistened by the flow of tears it becomes a progressively active agent in destruction and continues in the destructive action as long as a particle remains which has not already become fully reduced.

The primary purpose in the treatment of burns of the eye, as well as of that of

any other injury to the eye, is the preservation of the vision to as great an extent as possible. The next in importance is the preservation of mobility of the eyeball and the opening of the palpebral fissure. The third object of treatment is cosmetic.

The well known tendency to cicatricial contraction following the healing of a burn is very annoying in burns of the eye and eyelids. Sometimes the eyelids will contract to such an extent as to prevent opening the lids at all. In other instances the contractions may be such as to prevent the closure of the lids. Again, contraction of the conjunctiva with formation of adhesions may be so great as to cause almost total fixation of the globe. A burn involving the conjunctiva of the globe and lids is almost certain to be followed by adhesions between the conjunctiva of the globe and that of the eye-lid. These adhesions form, too, at a period in the treatment when every effort is being directed to preservation of the cornea. This precludes at times the placing of a foreign body, as a plate of lead or aluminum in the conjunctival sulcus to prevent adhesion. Its pressure retards healing of the corneal ulceration.

The list of agents which have produced burns of the eye is long. It includes the following:

Explosions of gunpowder, dynamite, or gases; molten metals, as iron or lead; hot water or steam; heat from a glowing furnace; intense light from electric arc-light; unslacked lime; carbolic acid; crude sulphuric acid (or "oil of vitriol"); hydrochloric acid; nitric acid; fumes of ammonia; strong solutions of corrosive sublimate, or nitrate of silver; hot oils, pitch, etc.; ends of matches, glowing ends of cigars, pieces of burning tobacco from a pipe.

Burns caused by explosion of gunpowder or dynamite are nearly always complicated by cuts and bruises caused by

flying particles or by direct force of the explosive blast. The face and eyelids usually get the most of the burn, but very frequently the open eye receives just as severe burns. The conjunctival folds are filled with dirt of different sorts and frequently the ocular conjunctiva and the cornea are filled with small foreign bodies driven into them.

If the explosion is that of gunpowder, the eye is usually peppered with unconsumed grains of powder driven directly into the tissues. If the pain is intense, usually some form of cocain must be used before the eye can be opened enough to clear away the debris. The writer's experience is that pain is more severe in superficial burns than in deep ones. No more cocain should be used than is absolutely necessary, as it has a tendency to devitalize weakened tissues. As soon as the eye can be opened all dirt should be cleared away as carefully as possible. The foreign bodies in the conjunctiva may be removed as thoroughly as possible. If the corneal epithelium is filled with foreign bodies the writer believes it is best to not endeavor to pick out many of these by an instrument at the first dressing. It is impossible to know how deeply the cornea is injured. Very much manipulation of that structure might cause more damage than would otherwise occur on account of the burn alone. It should be cleaned as much as may be by irrigation and slight operative proceedings. Filling the eye then with a bland oil, over which the eyelids are closed, will usually lubricate the foreign bodies enough to prevent irritation and scratching of the lids by them. At the next dressing a great many of these foreign bodies will be found to have come loose spontaneously. Others that are still embedded may be then carefully removed. One case in the writer's experience about three years ago demonstrated the wisdom of not interfering at the first dress-

ing too much with the foreign bodies of cornea. The case was that of a boy who had emptied a powder horn upon a board and then touched a lighted match to it. The face and eyelids and forehead were burned over their entire surface. The eyes were both open when the explosion occurred. The boy was in severe pain when seen about an hour after the injury, eyes tightly closed. A few drops of 4% cocain solution were worked between the eyelids and when these were opened the eyes were found to have received the blaze directly upon the front of the globe. The cornea was white and filled with foreign bodies, including many grains which were driven into it and the folds beneath the eyelids were filled with foreign bodies. All loose foreign bodies are removed from the eye and all from the conjunctiva. The cornea was so thoroughly covered with them that I decided to let it alone until second dressing, when I could determine more definitely the depth of the burn. The eyes were filled with bland oil and closed, care being taken to leave a large quantity of the oil under the closed lids. This was in early evening. The dressing was not disturbed during the night, as the boy was resting very comfortably all night. The next morning the eyes were opened and I was much astonished as well as pleased to find a clear bright cornea of each eye. The burn had destroyed the epithelium only, and this had come away from the next layer of the cornea and carried with it all of the foreign bodies which had covered the cornea the evening before, with the exception of a few which had been driven into the deeper structures of the cornea. These were removed by the use of a spud. Under treatment both eyes went on to uneventful recovery with but a very few tiny white scars of the cornea, where the foreign bodies had been most deeply embedded. I feel certain that there

would have been much more scarring of the cornea if I had attempted to remove all of that great number of foreign bodies from the cornea at the first dressing.

Injuries caused by explosions of dynamite are not due as much to the *burn* as to the *blow*. The force of the explosion is so great that the tissues of the eyes, even if not struck by flying foreign bodies, are greatly contused, usually far beyond recovery. Injury to eyes caused by explosion of inflammable gases is usually a burn in the primary sense of the word, the open eye being in momentary contact with the blaze.

Injuries by hot water or steam while classed as burns are really *scalds*, and different from burns by dry heat and chemical caustics, because not so much water is extracted from the tissues. Heat from a glowing furnace or the light from an electric arc light may be so intense as to cause destruction of the epithelium of the eye.

By far the most frequent cause of burns of the eye is unslacked lime. Unslacked lime (monoxid of Calcium), coming in contact with the conjunctiva, rapidly absorbs the water of the tissues and gives off an enormous amount of heat, causing rapid destruction of tissues. Seen immediately after the accident the conjunctiva looks white and seared. In most cases, unfortunately, the cornea is involved. The accident is most commonly found among plasterers and those engaged in mixing mortar. It has occurred, however, in warehouses where unslacked lime is handled.

The burned tissues eventually slough by leaving a raw surface, or contiguous raw surfaces, which heal by granulation. There is almost certain to be symblepharon, one or multiple, following healing of such burns.

The immediate treatment of burns by lime according to Norris and Oliver consists in the avoidance of all watery



solutions. An attempt should be made to saponify the lime that may be remaining in the eye by means of animal or vegetable oils or fat of some kind. Lard may be used. Milk may be substituted. A careful search should be made for all particles of matter. Usually before the eye is seen by the physician the lime has about all been oxidized by the flow of tears or by attempts of friends to wash out the lime with water.

The oil treatment is probably the best to be followed even late. The animal or vegetable oils should be used. Lanolin, castor oil or olive oil. The mineral oils act well as protectives, but do not absorb or saponify as well, if, indeed, at all. The sterilized oils should be continued throughout the entire course of sloughing, healing, and cicatrization. Atropin may be incorporated in the oils, also cocain if necessary. But only if necessary. Cocain tends to retard recuperation of tissues and retards healing.

In Wood's *Ophthalmic Therapeutics* immediate treatment of burns of the eye by lime or other caustic alkali is stated to be gentle but thorough irrigation with very dilute (one per cent) vinegar. He then states that all solid substances should be washed out with sterile water. He also recommends irrigations with cold water to remove the lime. You will notice that this is just the opposite to that recommended by Norris and Oliver before stated. After the irrigations, warm vaseline or castor or olive oil should be instilled.

During the process of cicatrization care should be used to prevent union between raw contiguous surfaces. The wearing of a shield of some foreign substance between the eyelids has been tried, but it is unsatisfactory in many ways. It endangers the cornea, it is inconvenient and painful. It is said that strips of the skin like lining inside of an eggshell are sometimes used successfully, interposed between the eyelids and the eyeball. It is

recommended to break up the adhesions twice a day with a blunt probe. This also is far from satisfactory. If the cornea may be kept free it is sometimes better to omit such frequent manipulations until the eye has recovered and all surfaces healed. Then divide the adhesions and lay in a skin graft.

Burns by carbolic acid are usually not deep. I find no specific treatment given for burns caused by this chemical. I would think, however, that vinegar or alcohol, diluted, would meet the indication. It should be remembered that "carbolic acid" is *not* an acid; and alkalies do not act with it as with an acid.

Burns by sulphuric, nitric, or hydrochloric acid are sometimes met with. Irrigations by one or two per cent sodium bicarbonate solution do well as immediate treatment. Lime water, milk or albumen may be used. Chemical burns are apt to be progressive and prolonged in after-effects and may extend to the interior of the eye causing serious disturbances of vision.

Molten metals, as iron or lead, sometimes get into the open eye and cause severe burns. I have very recently had under treatment a severe burn of the eye and eyelids caused by molten metal at Malleable Iron works. The eyelids closed immediately over the metal, which remained there until cold. When the lids were parted the iron dropped out moulded to the shape of the front of the eyeball.

Employees of the Malleable Iron Works claim that the malleable iron burns are worse than any other kind, that the burn never ceases in intensity before ten days from date of injury. There may be something in this belief. Certain it is that this burn of the eye acted most stubbornly for nearly two weeks. There was sloughing of the upper eyelid, with formation of adhesions between upper eyelid and the conjunctiva of the globe.

Burns of the eyelid partake largely of

the character of burns of the skin of other localities and occur in the different degrees. They are a frequent cause of disfigurement due to contraction of scars. The treatment is conducted along the general principles of surgery,—prevent infection and protect from outer air. This is well accomplished by applying a surgical moist dressing; a loose compress of cheese cloth or gauze, wrung from a weak antiseptic solution, as of boric acid, 3 per cent, or carbolic acid 1 per cent. Carron oil may be applied in superficial burns. In deep burns it is not well handled. If gauze sticks to the wounded surface or granulations springing up become fastened in the meshes and cause pain and bleeding upon removal, oil silk or oiled paper may be used as protective covering instead of gauze. The moist gauze dressing may be covered with rubber protective tissue to prevent drying and to maintain mild warmth. It should be frequently changed and cleansed.

In all burns of the eyes, even of apparently slight degree, there is usually considerable shock present. Patient should be kept quiet; and is better off in bed. In all burns of the eye I believe atropin should be used in the affected eye. Its use may many times prevent sympathetic irritation in the fellow eye.

And now I come to that part of this paper which was my primary reason for writing it. I have long employed, in burns of various parts of the body, local applications of picric acid, with splendid results. It seems at times to even have the power of re-establishing the vitality of burned tissues. I have seen quite severe burns of the skin, treated with picric acid, recover without even desquamation. This treatment has been a great favorite with me and I have long wondered why it was not *the* treatment above all others for burns of the eye. I have searched all literature that has ever been at my command, watched clinics, and made inquiries for a long time, yet

never saw or heard of it being so applied. I have for a long time made some original ventures in the use of picric acid in burns of the eye and it was my purpose in this paper to present to you something original.

Alas for originality claims! Three days ago I received a volume of Wood's *Ophthalmic Therapeutics* first edition just off the press, the first volume in any language which gives a full account of the non-operative treatment of eye diseases from the earliest to present times. Searching it for picric acid applications in eye diseases I found the following:

Page 396. "Acid Picric."

Carbazotic Acid. Picric Acid. Trinitrophenol.

This agent is obtained by the action of nitric acid on such organic compounds as salicin, indigo, etc., and occurs as inodorous, yellow needles of an acid, bitter, acrid taste. It forms a bright yellow solution in 90 parts of water, more soluble in ether and alcohol.

It is incompatible with all alkaloids, is explosive with sulphur and phosphorus and is a deadly poison. It stains all tissues a bright yellow and is rarely used in ophthalmology.

Businelli and A. Fortunati (*Bolettino dell'ospedale oftalmico della provincia di Roma*, Oct., 1907), found that picric acid may be used with advantage in burns of the eyes, from fire or chemical substances. It is said to be of special benefit in burns produced by quicklime. For this purpose the following ointment may be applied two or three times a day:

Acid. picric.....0.20 (gr. 3)

Vasclin. alb.....10.00 (gr. 150)

A little cocaine solution may be instilled previously, to prevent pain."

Page 705. "It has long been known that a saturated solution of picric acid is one of the best applications to a skin burn, relieving the pain in a marvellous manner and acting as a powerful antiseptic. A Fortunati, after making experiments with rabbits' eyes and after long clinical experience, warmly recommends picric acid for treating burns of the conjunctiva and cornea, especially by chemical agents, including lime. He finds that a 2 per cent. ointment—picric acid 20 centigrams to white vase-

line (neutral reaction) 10 grams—is better than a watery solution. He applies it twice or thrice in the day after the instillation of a few drops of cocaine. The results are surprising, especially in the direction of relieving pain. Symblepharon is infrequent after the picric acid treatment. (*British Medical Journal*, August 28, 1908.)”

Page 753. “Fortunati warmly recommends picric acid in the treatment of chemical burns of conjunctiva and cornea, especially by lime. He uses an ointment of 20 centigrammes of picric acid with 10 grammes of white vaseline. The medicament is applied twice or thrice a

day, the conjunctival sac having first been rendered anesthetic by cocaine, to mitigate the smarting caused by the picric acid. The results of this treatment have been surprising, particularly when the acid has been applied from the beginning, after the eye has been carefully cleansed, and before the supervention of ulceration and secondary infection. The clearing of opacities, even when deep and wide, is often marked. Treatment should be continued until a cure is complete. Fortunati’s work is most suggestive, and the means indicated by him should be given a trial in these difficult cases.”

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## RECURRENT VOMITING OF CHILDREN

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Detroit.

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Recurrent vomiting is a disease of children characterized by repeated attacks of severe and prolonged vomiting accompanied by symptoms of grave metabolic disturbance. One recently issued text-book on diseases of children denies that any such disease exists, and the discussion of this illness in nearly all of the current text-books is both incomplete and misleading. Anyone who has once recognized the disease has no doubt as to its existence and clinical entity. As a matter of fact the number of cases which have come to my attention during the past few years leads me to believe that the disease is much more prevalent than has previously been supposed.

The clinical picture may perhaps be put before you by a brief recital of three case histories which have come under my observation.

**Case I.** Bottle fed child, never ill a day, except for vaccinia, until her second birthday; weighed then over 33 pounds. At this time

was nervous and fretful for a day and then woke in the night vomiting. Continued to vomit at irregular intervals from one to six hours for three days. The vomitus was food at first, but soon became a clear limpid fluid with some mucus. Later this became streaked with blood, evidently from severe retching. The vomiting was occasionally of a projectile type, the child suddenly rising up and the first fluid ejected going clear over the foot of the bed. There was extreme thirst but all of the water, as well as the food and medicine offered during these three days, was promptly vomited. There was obstinate constipation. The sweetish, fruity odor of acetone was plainly evident on entering the sickroom and the vomitus smelled strongly of it. No examination of the urine was made during this attack.

During these three days the child lay in a half stupor, rousing up three or four times in the twenty-four hours for a few minutes. The craving for water was pitiful, yet she would often ask for it and drop back to sleep before her lips could be moistened. After the third day the stupor began to lift, large doses of calomel were retained and as soon as the bowels began to move improvement was rapid. The first stools were very foul and dark.



This attack began on August 21, 1906. On December 11 a second and more severe attack began. The patient vomited twenty-five to thirty times a day for seven days with absolutely no food or water retained by the stomach. The stupor was practically coma for three days. The odor of acetone was strong on the breath and the urine showed a marked reaction for acetone and diacetic acid. The liberal administration of alkalis had apparently no effect, and the vomiting was finally checked by the hypodermic administration of morphine. Obstipation persisted throughout and for several days retention of the urine made the use of a catheter necessary. Emaciation was rapid and extreme. On the seventh day some delicate broth and calomel tablets were retained and convalescence began. Improvement this time was rather slow and the child was not well for fully three weeks. Except for one or two days when vomiting occurred only once or twice, there were no further attacks until August, 1907. At this time the vomiting and stupor lasted three days. The symptoms were less severe, but the vomiting occurred once or twice a day for about two weeks. On August 18 adenoids were removed from the child under anesthesia. Only about  $1\frac{1}{2}$  drams of ether were given, yet she vomited repeatedly for 36 hours. Later it became necessary to free the clitoris from an unusual number of adhesions. Ether was again given, the anesthesia this time lasting about 20 minutes. Two days of vomiting followed. With these two attacks, due to anesthesia, there have been none since last August, now ten months. The general health is excellent, the child is very large for her age, and is very active. She sleeps rather poorly, possibly an inheritance from her mother, as there seems to be nothing in particular to account for her occasional wakefulness.

[Note.—May 1, 1909. This child remained well 17 months and then had a mild attack lasting two days.]

**Case II.** In May, 1908, a child nine years old was brought for persistent cough. On examination the child was found to be emaciated and corresponding in size to a child six years old. Besides the evidences of mal-nutrition there was considerable adenoid obstruction to the naso-pharynx. These were removed under gas-ether anesthesia lasting not more than two minutes. Not more than two drams of ether were used. Twenty minutes after the opera-

tion the child began to vomit and this continued at irregular intervals for two days. All food, water and medicine were promptly ejected. There was no pain, obstipation was persistent and very little urine was passed. The abdomen was scaphoid and not tender. The patient dozed the greater part of the day and night.

On careful inquiry it was found from the mother that since about two years of age this girl had had frequent similar attacks, sometimes more and sometimes less severe. It seems that one previous attempt had been made to remove the adenoids and the child had vomited for three days after this anesthetic. The last attack of vomiting before the one which I observed had occurred about a month before. The mother had often noticed a peculiar, sweetish odor about the child when sick. The attacks corresponded in all essential particulars to this one. Usually no physician had been called, the vomiting ceasing spontaneously after a few days.

This history made me suspicious of a recurring acid intoxication and a specimen of urine obtained at this time gave a marked acetone reaction. In view of these facts and the etiology of that intoxication, which will be discussed later, the mother's description of the child's peculiar diet was significant. I asked the mother to give me an idea of the child's regular diet and learned that she liked but few things. She refused all cereals, vegetables, and sweets which the other children ate and confined her diet very closely to proteids and fats. She was especially fond of butter and bacon.

**Case III.** This child nursed for 12 months and was never ill. When about 13 months old in December, 1906, had a severe attack of vomiting which lasted for three or four days. The child seemed very sick, the vomiting was of the projectile type and absolutely nothing was retained by the stomach during that time. The illness seemed strange to the parents because the child had been perfectly well and made a prompt recovery after the vomiting ceased. In August, 1907, she had an attack of apparently typical recurrent vomiting which lasted four days. From this date the child remained in good health until March, 1908, when I first saw her. There was at this time a fairly severe attack, lasting five days. The symptoms were perfectly typical and acetone and diacetic acid were found two or three times in the urine dur-

ing this attack. In this case there was a marked nervous heredity. The child was physically precocious, very active and always hungry.

These cases represent somewhat varying clinical types of the same disease. The connection of this disease with the general subject of acidosis, or acid intoxication, is an extremely interesting one. Related conditions are diabetic coma which follows the restriction of carbohydrates in the diet, chloroform poisoning, pernicious vomiting of pregnancy, the extirpation of the pancreas, poisoning by morphine, phloridzin or sodium salicylate. Experimentally the excretion of acetone is increased by giving a diet rich in fats. It is decreased by feeding starch, or grape or cane sugar. In cases where there is occurring large excretion of the acetone bodies, as in diabetes, the excretion can be considerably increased in amount by giving large quantities of alkali.

In 1882, Gee described in St. Bartholomew's Hospital Reports five cases which he designated as "fitful or recurring vomiting." This was probably the first description of the disease under consideration.

### **Etiology.**

This affection commonly begins in early childhood. The earliest case which I have observed occurred at thirteen months. The children are commonly of a precocious type with large appetites and without digestive disturbances. There has been, however, in most cases which I have observed, a tendency to constipation. In the second case which I recorded it seems likely that dietetic errors had considerable influence in bringing on the attack.

Heredity is probably the most important and predisposing factor. Most of these cases inherit neurotic tendencies at least. In one of my cases the father

was alcoholic. In another the mother had a considerable albuminuria during early pregnancy and was of a neurotic type. In one family there have been three children with this disease, one case ending fatally. These children seem to be usually precocious, large, fat, and often intelligent beyond their age. They often have appetites so great as to cause remark.

The exciting causes of an attack are sometimes evident, but often not. In one case, a typical attack in a boy of four was brought on by the advent of a new dog into the house. The child was excited, and in 36 hours the attack of vomiting began. This was not his first attack. In another case under my care a sudden fright was believed to be the cause of an attack. In two cases severe attacks were induced by anesthesia produced by nitrous oxide and ether. In one case less than two drams of ether were given, yet the vomiting continued for four days. In many instances, however, there is no especial reason found. The child may be on a diet and watched with the greatest care, but even with these precautions the attacks may recur.

### **Symptoms.**

Each case is likely to have its own prodromal symptoms. These may vary greatly in different cases. In one case it was noticed that white stools preceded the attack by a day or two. In three cases under my observation there have been unusual activity and a voracious appetite. On the other hand, there may be lassitude and constipation.

The most characteristic symptom is the vomiting which occurs commonly from five to 25 times in the 24 hours. It seems not to be preceded by any feeling of nausea. The vomitus is first of food and later of a clear fluid which may or may not be accompanied by small quantities of mucus, bile or

blood. Vomiting is caused by any substance entering the stomach, even a sip of water precipitating an attack. It continues to occur, however, at irregular intervals when absolutely nothing is taken by the mouth. Snow found an excess of hydrochloric acid in four cases, but other reports would indicate that the acidity of the vomitus has no constant characteristics. In many instances the vomiting ceases as suddenly and with as little apparent reason as it began. There is a great and constant thirst. The abdomen is retracted, and there is no tenderness or pain until the continuance of the severe retching gives some pain and tenderness in the stomach region. In all of the cases under my observation there has been absolute constipation. After the first and second emptying of the lower bowel by enemas absolutely nothing in the way of fecal matter passes the bowel until the attack begins to decline.

There is usually a slight elevation of temperature, I have not seen over  $100.5^{\circ}$ . In those cases where a higher temperature is reported, I believe there has always been some complication. In one fatal case which I observed the temperature preceding dissolution rose to  $108^{\circ}$ .

The urine is commonly reduced in quantity, high in specific gravity, contains an excess of uric acid and usually indoxyl. The characteristic feature, of course, is the presence of acetone and diacetic acid.

The consistent presence of acetone in connection with these attacks was first pointed out by Edsall. These constituents are found frequently in an early part of the attack, and may be entirely wanting during the height of the disease. It is not uncommon to find a trace of albumin in these cases.

The tongue in the beginning has a thick coat, but later on becomes glazed and may be cracked.

The tendency to somnolence, amount-

ing in severe cases to a deep coma resembling in every respect the coma of diabetes, has been marked in all of the cases which I have seen. In no disease of my experience do emaciation and prostration develop so rapidly. In cases which go at all beyond the mildest type the patient gives one the impression of being very sick indeed. Among the accidental symptoms which I have noticed were a fine, itching eruption and slight edema of the eyelids. In some cases icterus follows the decline of the vomiting.

A mild attack may last only one or two days. Seven days of vomiting is the longest attack I have seen. Cases have been reported as continuing 14 days.

### Diagnosis.

The history of previous attacks, the occurrence of the characteristic vomiting, and the presence of acetone in the urine should enable one to make the diagnosis in the absence of acute symptoms of the abdomen which may lead to vomiting. One needs to differentiate pyloric stenosis, of both the spastic and hypertrophic types, intestinal obstruction from any cause, gall bladder and appendiceal disease.

### Prognosis.

Some writers have stated that this disease was never fatal. This is certainly a mistake. I have myself known two fatal cases, and within about two years several fatal cases have been reported in the literature. In every case the situation becomes very grave. So far as the milder cases are concerned, however, and this type of cases evidently predominates, the prognosis is good both for recovery from the immediate attack and for the ultimate cessation of the attack. In favorable cases vomiting may cease suddenly, the coma lift, and



convalescence progress very rapidly. Unfavorable symptoms are a deep coma and rising temperature with cessation of the vomiting. In one fatal case which I saw, examination of the urine about 24 hours before the onset of the final fatal coma, revealed a very remarkable shower of casts. The microscopic field was filled with these casts in as great profusion as one often finds the triple phosphates of an old specimen.

### The Source of the Acetone.

Embden and his pupils have shown that the acetone is derived from protein bodies which in the catabolic process pass through the stage of fatty acids, thus settling the old dispute as to whether acetone is derived from proteids or fatty acids. The liver is the site of the formation of the acetone. Hirschfeld demonstrated the fundamental fact that it is not increased protein metabolism, nor the destruction of proteid tissues, nor starvation, which are the essential factors in causing acetonuria, but that the latter is due to the lack of proper carbohydrate metabolism. The source of the fatty acid would indicate that when fatty acids are broken down in the liver without a certain quantity of carbohydrate metabolism proceeding at the same time, there is produced an abnormally large quantity of acetone. Our knowledge of the intimate chemistry of the liver is not yet sufficient to enable us to say just in what way the carbohydrate acts in thus inhibiting the formation of the acetone. It is possible, even probable, that acetone is a normal product of a certain stage of metabolism, but in a normally active liver is promptly oxidized. Von Noorden, however, gives the following as the probable chemical course:

#### NORMAL.

Butyric Acid.  
B—Oxybutyric Acid.

Acetic Acid.  
Carbonic Acid—Water.

#### PATHOLOGIC.

Butyric Acid.  
B—Oxybutyric Acid.  
Aceto-Acetic Acid.  
Carbonic Acid—Acetone.

Why the presence of carbohydrates should tend to make the catabolism follow the first path and their absence cause it to pursue the second path is quite unknown.

Acetone often occurs in the urine almost immediately after the administration of chloroform, and it is well known that coma frequently supervenes in cases of diabetes. Guthrie in 1894, first reported 9 cases of delayed chloroform poisoning. There was advanced fatty degeneration in the liver, heart and kidneys. There was acetonuria and death usually in a few hours or days.

Any acute disease producing inanition in an infant will increase the amount of acetone excreted in the urine, simply as the result of the want of a carbohydrate due to faulty digestion. Hirschfeld produced an acetonuria by feeding an exclusive fat diet.

It is well known that in starvation a severe acidosis is consistent with fairly good health. Diabetics may excrete B—oxybutyric acid for months without showing signs of poisoning. It is quite probable, however, that the long continuance of this condition is harmful to the tissues, and as Bainbridge points out, the grave metabolic disturbances which usher in the coma characteristic of fatal acid intoxication, probably represent the final defeat of the tissues in their struggle to eliminate the acid. As a matter of fact, the onset of coma is usually preceded a day or two by a decrease in the amount of acetone and the associated bodies eliminated. The characteristic odor disappears from the

breath, the temperature falls and there is often great restlessness and anxiety.

Whether or not the symptoms of recurrent vomiting in children are actually due to the acid intoxication, or whether the primary metabolic fault which permits the continued generation of these acids is the real source of the symptoms it is not possible now to say. In the second case, of course, the appearance of acetone would be merely the result, rather than a cause of the difficulty.

True recurrent vomiting is most certainly not a gastric neurosis as it has been called. It seems that the primary fault lies in the absence of carbohydrate metabolism, accompanying the breaking down of fatty acids. This obviously might arise from three causes—the lack of carbohydrates in the food, a failure in carbohydrate digestion, or from an excess of fat in the food. If an organ is at fault, it lies between the pancreas and the liver. The nervous heredity of these children and the fact that the exciting causes seem often to be of a nervous character such as fright or shock, would lend support to the theory that in its onset the disease is a neurosis.

### Treatment.

When confronted with an acute attack all water and food should be withheld from the stomach until there has been no vomiting for twelve hours. The lower bowel should be thoroughly emptied by enemas. There should be regular high enemas of alkaline fluids to counteract the acid intoxication, and the intense thirst. If the vomiting persists for three days it may be well to give nutrient enemata. Hot compresses over the stomach sometimes appear to decrease the frequency of the attacks of vomiting. Absolute quiet is essential.

In a certain proportion of cases a liberal administration of alkalis appears to shorten the attacks. These should be given first per rectum and later may be given in a hot solution by the stomach. They are usually quickly vomited but probably exert considerable neutralizing effect before their rejection. A rational procedure, which, however, I have never tried, would be systematic stomach irrigation with an alkaline solution. In order to be efficient the alkali must be given in large quantities, not less than four drams sodium bicarbonate in every 24 hours. In severe cases the soda solution might be given intravenously.

Morphine in small doses may be used as a last resort in the worst cases. I have seen it used once with apparently good results.

As soon as the vomiting has ceased, calomel should be given in large doses, not less than  $\frac{1}{2}$  gr. at a time. At first food may be a little delicate animal broth, given a teaspoonful at a time. Water should be given only sparingly until there has been no vomiting for 24 hours.

Between attacks attention should be given to the diet, which should be of the plainest and simplest kind. The amount of fats should be restricted. Constipation should be promptly treated. Hydrotherapy as a tonic for the nervous system is undoubtedly of value. Carefully regulated out-of-door life, free from excitement or irritation, is essential. If an attack of vomiting seems imminent from the accustomed prodromal symptoms, calomel and soda should be given promptly. Not less than 2 gr. of calomel should be given. No food should be given, but water in small quantities may be frequently repeated so long as there is no vomiting.

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## A SYMPOSIUM ON THE TOXEMIAS OF PREGNANCY\* THE ETIOLOGY AND THE PATHOLOGY

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It seems to be a well established fact that the less that is known about the etiology of a disease the less can a rational and scientific treatment be instituted. One has only to trace the history and advancement of some of the well known disorders to be more firmly convinced of the truth of this assertion.

The toxemias of pregnancy still belong to the unsettled problems of medicine. Therefore this class of disorders has no sharply defined line of treatment. In the one case the cause may be an overloaded bowel and catharsis is advised. In another the cause is said to be hepatic insufficiency and treatment is instituted along these lines. Still other examples might be cited, but these two are enough, perhaps, to show that the whole question of the toxemia of pregnancy is, as regards its etiology and pathology, still in a nebulous stage.

### Etiology.

Many and varied have been the theories advanced as to the causation of this disorder in the pregnant woman. Many different and separate classifications have been made. Hyperemesis gravidarum, a mild toxemia, and eclampsia, were for a long time classed and recognized as different disorders. Now it is well known that they are simply a different intensity of the same disease, the difference is one of degree not of kind. Some obstetricians claim that the toxemia is due to hepatic insufficiency. This insufficiency is brought about in two ways. First from some disturbance of the liver

function before conception, leading to a partial destruction, a diminution of that function. When conception takes place the increased demand upon the liver cells finds that organ in no shape to perform its increased quota of work. Poisonous materials, that would ordinarily be taken care of and rendered inert, are allowed to enter the blood to the detriment of the entire system. Secondly, the disturbance of the liver function may be brought about after conception by the enormous increase of work that the liver is required to do. As the fetus grows, the maternal organism has to take care of the excretions of the fetus as well as of its own. The katabolism of the maternal organ has been enormously increased. This means an extra amount of work for the liver in rendering the poisonous materials inert. The liver may break down under this increase of work and hepatic insufficiency result. And directly proportional to the amount of hepatic insufficiency is the severity of the clinical symptoms. A slight insufficiency will produce but a mild form of toxemia, but a marked insufficiency may lead to hyperemesis and eclampsia.

There are some who claim that toxemia is due to the presence of actual toxins in the blood, without explaining where these toxins come from or how they get into the blood. Then there are still others who say it must be due to some disturbance in the maternal metabolism—which is only another way of saying that they don't know. The elimination of nitrogenous waste materials,

\*Read at the Manistee meeting of the Michigan State Medical Society, June, 1908.



some radical change in the reaction of the maternal blood, deported chorionic elements and the end products of fetal metabolism existing in the maternal blood, are some of the other theories advanced to explain the cause of the toxemias of pregnancy.

### **Pathology.**

Naturally the amount of tissue destruction is directly proportional to the severity of the toxemia. A mild form will leave few or no pathologic areas. A severe form will affect numerous organs or parts of organs. Those most likely to be attacked are the liver, kidneys, and spleen. Often the thyroid and the blood show pathologic changes.

### **The Liver.**

In the liver the pathologic changes consist in areas of degeneration leading to necrosis. The former may exist without the latter and vice versa. In a severe case, as in eclampsia, one may find all stages of degeneration and necrosis. Evidences of an attempt at regeneration along the bile capillaries may be seen. If this area of necrosis is large, then the stage of acute yellow atrophy will be found. Thrombosis and phlebitis of the hepatic viens will produce infarcts, which are at first anemic, but may be later hemorrhagic due to rupture of the surrounding vein. As was stated above, if the liver meets the increased demand made on it, the pathologic lesions will be slight. Also it should be remembered that the extent of the pathologic lesions varies directly with the severity of the toxemia, other things being equal.

### **The Spleen.**

The spleen is generally enlarged and presents the usual picture of changes due

to sepsis. The cellular elements are markedly increased at the expense of the splenic pulp. The function of the spleen may be so interfered with that a subsequent anemia or leukemia may result.

### **The Kidneys.**

The pathologic changes in the kidneys are very irregular and in most cases secondary. Many cases of the severe toxemias (eclampsia) have come to autopsy with practically no pathologic changes in the kidneys. However, an acute parenchymatous nephritis with subsequent atrophy may result. In the later months of pregnancy, the so-called "kidney of pregnancy" usually exists, but these changes in the kidney structure disappear soon after confinement.

### **Thyroid.**

The thyroid is generally enlarged, but is not specifically attacked. Recently many grave pathologic changes have been noted in the thyroid in severe toxemias (eclampsia). Further investigation may be able to show, at least in eclampsia, that the thyroid plays a large part in the causation of toxemia.

### **Blood.**

The changes in the blood are simply those of sepsis. Thrombosis and embolism result, usually, in the hepatic veins.

Such in a very brief way are the principal theories advanced to explain the etiology of the toxemias of pregnancy. The pathologic findings are indefinite as so few fatal cases come to autopsy. It should be remembered a mild toxemia, hyperemesis gravidarum, and eclampsia are but different gradations of the same disorder. The difference between them is one of degree and not of kind.

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## THE TOXEMIAS OF PREGNANCY— DIAGNOSIS AND TREATMENT.

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Lapeer.

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In looking over the literature before writing this paper I noticed some authors dividing their cases in several classes, such as mild, moderate, and severe. I do not believe that cases of toxemia can be so classed. We have all seen severe cases get well, and so-called mild cases die. There is no symptom or group of symptoms or any method of diagnosis by which these cases can be classified. Some cases will have no symptoms at all, and suddenly have convulsions. Even the number of convulsions is no guide to the severity of the toxemia. We have no method of measuring the poison; hence we cannot tell what is severe and what is mild. We do not even know what the poison is. Not enough is known about the etiology of the disease to justify such a classification.

This is the disease of theories. One man sets up a theory, and some one else promptly knocks it down. We only know that in some way associated with pregnancy, some women will be profoundly poisoned, giving us a group of symptoms which are known as the toxemias of pregnancy.

In the 16 different theories advanced, a poison in the circulation is common to all of them, but there is a vast difference of opinion as to its nature. This much we know, that we are dealing with a disease having a frightful mortality. In those cases which die, there may be no nephritis, but a very constant condition is a hepatitis. It is a hemorrhagic hepatitis that leads to a necrosis. The three zones described by Virchow may be involved in any of the toxemias of preg-

nancy. Schmorl believes that a necrosis beginning in the peripheral zone is typical of eclampsia. In the other toxemias the central and middle zonal areas are affected. Eclampsia with few exceptions ceases upon the delivery of the child or in a few hours. Toxemia on the other hand does not always improve with the emptying of the uterus. It would seem that in this case a fresh dose of poison is given the patient, and this ordinarily does not occur for a few hours or a few days.

Some general facts before taking up the diagnosis may be of interest. It would seem that cases of edema are more amenable to treatment. In 1,000 cases in Johns Hopkins 50% had albumen in the urine and not a case of eclampsia; 7% had casts in the urine and nearly all had eclampsia. We know it is rare for eclampsia to recur in the same patient. I do not think this is true of the other toxemias, at least that is my experience.

In 496 cases of eclampsia reported from Olshausen's Clinic in Berlin, from 1900 to 1905 inclusive, there were 106 deaths, or a mortality of 21.4%. Nine cases had convulsions before labor. Post-partum eclampsia has a mortality of 7%. We also know that the mortality is higher the earlier the eclampsia occurs, being twice as high before the seventh month as after.

E. E. Bumm has been able to report the lowest mortality ever recorded of eclampsia. In 79 cases he had a mortality of less than 2% by treating his cases by immediate delivery. I am impressed by American literature that a

more conservative course is followed. The medical treatment has a field. Our Catholic patients will not submit to any treatment in which it is necessary to sacrifice the child to save the mother.

Toxemia manifests itself by vomiting, headache, epigastric pain, edema, a lessened amount of urea and albumin, or casts in the urine and an increased blood pressure. There may be absolutely no symptom, when, like a bolt of lightning out of a clear sky, a woman has convulsions.

Vomiting in pregnancy may be purely reflex. It may be a predisposition due to anomalies in size or shape of stomach. There may be anemia, a nervous or a hysteric condition, or we may have vomiting from traction on uterine organs, misplacements, and irritation from catarrhal conditions. We get this in the simple condition of uncontrollable vomiting of pregnancy.

In toxemia we have headache, epigastric pain, increased saliva, or the opposite condition of dryness of the mouth, resembling the condition found in typhoid fever, and slight edema, nausea or vomiting. In toxemia we get these symptoms before the condition of necrosis of the liver spoken of above commences. When we get a hepatitis in its later stages we have stupor or coma, black vomit, bile in the urine, rapid breathing, convulsions in eclampsia, and occasionally an acute yellow atrophy.

A few words about acute yellow atrophy. This disease should be called either pernicious jaundice or icterus gravis. Atrophy of the liver occurs late in the disease, and some cases die before atrophy can take place. About one-half of the cases of pernicious jaundice occur in pregnant women. In cases recovering, a watery or a biliary diarrhea with profuse sweating is a favorable prognosis. Icterus gravis usually occurs after the fifth month of pregnancy. The disease is characterized by jaundice, with

severe cerebral symptoms of delirium and restlessness. There is extensive destruction and atrophy of the liver. The disease lasts about two weeks, rarely to fourth week. The left lobe of the liver is the first to diminish in size, but the patient may be dead before atrophy takes place.

It is just as important in a suspected case of toxemia to examine the blood pressure as it is to examine the urine. The blood pressure cannot be judged by the finger. I was very much impressed with the remark of Dr. Babcock, of Chicago, that he was unable to estimate the blood pressure by the sense of touch. It has been found that in many cases albuminuria is absent, but a persistent increased blood pressure gives notice of the impending storm. If albumin increases and urea decreases, labor should be induced.

The Esbach albuminometer consists in the precipitation of albumen by a solution made up of picric acid 10, citric acid 20 and distilled water 1,000 drams. Fill to mark "U" with urine and afterwards to "R" with reagent, figures on scale being grams of albumen to liter.

Doremus ureometer—large branch is filled with 40% solution of caustic soda, to which is added 1 c.c. of bromine forming a fresh solution of sodium hypobromite. After mixture has settled, the shorter branch is filled with urine; by turning stop cock 1 c.c. of urine is allowed to enter. The nitrogen rises to top—each division of scale representing 0.001 grams of urea to each c.c. of urine.

The typical picture of toxemia is that clinical picture of profound poisoning.

Medical treatment: The first indications before convulsions come on, are elimination and lowering the blood pressure. The latter may be done by nitroglycerin, sodium nitrite, or veratrum viride. It is a surgical principle that relief of tension prevents or lessens absorption. This may explain why vaso-



dilators have a beneficial effect in toxemia. Lowered blood pressure usually relieves a headache. I think it is safe to say that fully 90% of cases will get Basham's mixture. If we have a high blood pressure and albumen, or a scanty urine, the patient should have an easily digested and assimilated diet, preferably a milk diet. In the presence of convulsions veratrum should be given by hypodermic injection or better, veratrone, P. D. & C., 15 minims at a dose; chloroform is given, but many physicians believe that the convulsions are prolonged. Apomorphine has been recommended. The hot pack is useful in promoting free excretion from the skin. A useful apparatus may be fitted up in any home by using a tea kettle and a rubber tube, passing the free end of the tube under the bed clothes. In regard to morphine Tyson has warned against its use in interstitial nephritis. The action of morphine is to decrease all of the secretions of the body except the breast and skin.

The latter it increases. Pilocarpin is a dangerous drug. Croton oil and salines are commonly used and are good treatment. Normal saline solutions are under discussion at the present time. If you can get elimination, I believe a saline does good. I would suggest that Murphy's method of rectal instillation be used. In this way a pint or more may be absorbed every hour. If there is anything in diluting the poison this should accomplish it. Chloral and the bromides serve a good purpose. Venesection in Guy's Hospital before 1868 was the routine practice and the mortality was 30%. I believe it has a strong indication when cyanosis is severe. The results following puerperal toxemia are nephritis and Fera says epilepsy. If it be found that a patient does not continue to improve under medical treatment, premature labor should be induced. If it be found that urea is decreasing and albumen increasing, or a persistent high blood pressure and severe headaches, watch for trouble.

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**Newer Conceptions of Cardiac Arrhythmias and Their Treatment.**—Thomas E. Satterthwaite of New York gives the changes in the heart's action as affecting rhythmicity, contractility, irritability, conductivity, and tonicity, corresponding to which are five forms of arrhythmia. The old theory of the cause of heart action, the neurogenic, supposed that all motion was caused by stimulation of the intracardiac nerves. The more modern theory, the myogenic, gives the origin of action to the heart muscles itself, being originated by the muscle cells themselves. Pneumogastric arrhythmia, fundamental or sinus irregularity, as a variation of normal rhythm, is of little importance, and occurs mostly in the young. There is a varying length of the cardiac cycle, change being mainly in the length of diastole, without missed beats. It occurs in neurasthenia, brain diseases, febrile attacks, tuberculosis, and from excessive use of digitalis. Extrasystolic arrhythmia is a premature dwarf beat as given by the polygram. The short beat is preceded and followed by a normal beat, and is followed by a long pause. The extra systole is easily recognizable by auscultation. It is produced by a

stimulus starting in the primitive tissue of the auricle or ventricle, independently of the normal rhythm which starts from the sinus. A bigeminal pulse can be produced by extra systoles. They occur at all ages, in health and disease. They occur from coffee and tobacco, in fevers from severe toxemia, in convalescence with weak heart, and in pneumonia and rheumatism they suggest complications. Subjective symptoms are feeling of thud, or flutterings in the chest, and as if the heart stopped, and giddiness. Contractility is affected in the pulsus alternans, when it is impaired by some constant cause. The rhythm is invariably irregular. It is found in cardiac sclerosis. When the rate is not increased it is unimportant. When it is greatly increased there are fluttering, breathlessness, dropsy, acute dilatation, and the prognosis is grave. Heart block is caused by an affection of conductivity, the stimulus being delayed. The radial pulse is slow, while the veins of the neck pulsate more frequently, owing to normal rate of auricular contractions. Heart block may be partially complete, or we may have Adams-Stokes syndrome.—*Medical Record*, May 15, 1909.

## TOXEMIAS OF PREGNANCY—ECLAMPSIA

EDWIN ELLIOTT, M. D.

Chesaning.

From the standpoint of the laity, obstetrics is a simple problem,—merely the tying of the cord. To the intelligent obstetrician, who is able by abdominal palpation to tell the position of the child in utero, to manage the normal and abnormal presentation, to carry out an aseptic technic, to prevent lacerations, or if occurring to repair them, to meet the conditions that face any obstetrical case,—placenta previa, eclampsia, puerperal infection, etc.—the problem is difficult and complex.

It is of one of these conditions that I wish to speak, namely, eclampsia. I shall not try to give it a definition. Until the etiology is known the term cannot be scientifically defined. The physician who has never met a case need not want a definition to recognize it.

The etiology is unknown. A great many theories have been given. Theory, however, is the poetry of medicine, and imagination and fancy are not the qualities of mind to deal with cold facts. I shall not, therefore, take up your time in discussing the many theories. The one fact recognized, however, is that eclampsia is caused by a poison, an enzyme, and that it occurs only in a pregnant woman, or soon after labor. The logical conclusion, then, as to treatment, would be to terminate the pregnancy by emptying the uterus, at least as soon as a convulsion occurs.

I wish to cite some cases illustrating certain features.

**Case 1.** In my early practice, a bottle of urine was left in the evening at my office to be examined. It contained albumin and casts.

The next forenoon I was hurriedly called to the woman, a primipara, age 24, in the ninth month of pregnancy, and in convulsions. I advised evacuating the uterus. But, as it was my first case, asked and received consultation. The physician was opposed to the evacuating treatment, and urged the eliminative, with veratrum viride, pushed in full and frequent doses, until the pulse was slowed, and arterial tension was lowered, stating that he had met with success in all his previous cases, with this line of treatment; and that labor pains invariably would set in and the os dilate itself. The treatment was carried out. Chloroform was also given, the bowels moved, the kidneys stimulated, and also, the skin. The eclampsia continued. At 6 o'clock he was again called; and reluctantly consented to emptying the uterus. After a slow delay, under anesthesia, the os was enlarged by manual dilatation, forceps put on the coming head, and the child delivered, dead. The convulsions continued, though not so frequent, nor hard, and the next morning the patient died.

**Case 2:** I was called in consultation to a neighboring village, and catching the train, I was able to be at the house within ten minutes after receiving the 'phone call. The patient was a multipara, 30 years of age, and had one seizure. Immediate evacuation of the uterus was advised, and accepted. The patient was placed under anesthesia. Labor pains were commencing. The os was dilated manually, then forceps applied to the coming head and a healthy child delivered. The woman recovered. Casts and albumin were found in the urine, which slowly cleared up.

**Case 3:** A multipara in the ninth month of pregnancy, came to the office complaining of headache, nausea, failing eyesight, edema, and suppression of urine. An examination of the urine showed albumin and casts. The dangers were explained to her, the eliminative treatment was used and the patient dieted. Forty-

eight hours afterwards I was called, and the patient had two convulsions. No time was lost with elimination. The woman was anesthetized, the os dilated with a dilator, and then manually dilated, forceps applied, and the child delivered, but lived only a few hours. The woman recovered; and under the eliminative treatment the kidneys cleared up from albumin and casts.

**Case 4:** I was engaged in attendance to a primipara. The urine was examined, found perfectly normal. I was called that night in attendance. The first pains were commencing, abdominal palpation showing a child in L. O. A. position. I was congratulating myself on an easy confinement, when suddenly and without any warning, I was called into the room. The patient's eyes were staring, the mouth was twitching, and eclampsia began. I immediately commenced manual dilatation, but the cervix was non-yielding, and some time passed, in which convulsions occurred. However, I succeeded in dilating enough to apply forceps and deliver.

In the first case, the *veratrum viride* was completely useless, the chloroform only masked the convulsions, and the eliminative treatment exerted no appreciable effect upon the enzymes; and the manual dilatation was too slow. It was a case for a vaginal Cæsarian operation. Here I have to pay tribute to men like Carstens and Peterson, who advocate and teach this operation to obstetricians. The physician may wait in a case of appendectomy to give the benefit to his patient, by having a more skillful and more experienced operator. With eclampsia it is different. The woman is in the whirlpool of death and to send away

for expert help is in harmony with the action of the scriptural foolish virgin. Every physician practicing obstetrics is certain to meet with eclampsia. What better way to meet it than by being prepared? To be told that, only by experts, and only in hospitals, should this operation be done, means that the large percentage of women are deprived of this aid, and die because they do not get what they have a right to expect. With so many post-graduate schools, surely the obstetrician can learn the technic of the operation, so that he will not let his patient die.

The second case illustrates the success of placing the evacuating treatment first; and, then, the eliminative. In other words, first to evacuate, second eliminate. The third case illustrates that with threatened symptoms of eclampsia, the eclampsia comes. The fourth that an examination of urine will not always show albumin and casts; and that the symptoms may be absent from the patient until the convulsion occurs.

The different technics of emptying the uterus are manual dilatation, multiple incision, symphysiotomy, and vaginal Cæsarian section. The pathology of the disease shows lesions of the liver and kidneys, secondary complications of edema of the brain, larynx and lungs, broncho-pneumonia and nephritis. The prognosis depends upon these lesions and if the progress of these lesions cannot be told, then terminate the pregnancy before they have gone beyond the reparative stage.

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Sudden one-sided diminution of hearing after bathing may indicate nothing more serious than water in the ear or a plug of wax which has swelled up and obstructed the canal. If no means of syringing is at hand, the installation of ether and alcohol, equal parts, will dry up the plug and often cause it to disintegrate, with a corresponding improvement in hearing. Swollen seeds, peas or beans in the external canal, a frequent occurrence in children, can be treated similarly.—*Am. Jour. of Surg.*

Don't pour hot oil into the ear to relieve pain. Heat can be applied much better in a hot mixture of glycerin, alcohol and water, which will not turn rancid or clog up the ear, and can be removed by syringing with water. A towel or large pad of gauze wrung out in boiling water and closely applied over the ear, covered with oil silk or "protective" rubber tissues, is better than a hot water bag.—*Am. Jour. of Surg.*



## COMFORTS AND MINOR NECESSITIES IN THE MANAGEMENT OF OBSTETRICAL CASES\*

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C. HOLLISTER JUDD, M. D.,

Detroit.

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Pregnancy is a more or less normal condition for women in early adult life, and still, to many this period of their career is filled with various physical annoyances, disagreeable sensations and symptoms. These various phenomena will be discussed respectively as they occur before and after labor.

The patient should present herself to the physician soon after conception, as he can, in addition to guarding her life, offer her many suggestions which will add materially to her comfort.

A list should be provided her of the necessary articles for herself and baby, or the purchase of one of the obstetrical packages put up by the instrument makers would be very convenient. It contains practically everything required for the mother during her labor, and many articles for the child.

In our efforts to promote the comfort and welfare of our patients, diet and exercise occupy a prominent place. As the baby is more or less of a parasite and takes from the mother's blood more than its share of nourishment (the bone salts from her teeth are a familiar example), it is possible to cut down her diet to some extent without damage to her offspring. Proteid foods (meats, etc.), are tissue builders, and very necessary in the correct amount; still their difficulty of digestion and elimination, particularly the latter, give them a prominent place in relation to the various toxic symptoms of pregnancy, and unless the mother be anemic, they can be restricted with

great advantage to mother and child. The importance of fresh and green vegetables cannot be too much impressed upon the patient. A powerful digestant like pancreatin, in large doses, or hydrochloric acid, will often give much relief from the impaired digestion and nausea. Silver nitrate is also a useful drug. Frequent meals, beginning before the patient leaves her bed and continuing through the day, at intervals of three hours, will often give happy results; these meals should be very light, for example, a banana and glass of milk; the object being to keep the stomach from becoming quite empty. This method is applicable in the first few months of pregnancy; later, the tendency for the baby to grow abnormally large should be kept in mind.

Exercise is of great advantage to mother and child, and though very active exertion is contra-indicated, mild exercise like walking aids very materially in eliminating the waste products of metabolism, and thus supplying the child with better blood.

Massage, a form of passive exercise, often advantageously combined with electricity, will in a measure take the place of walking, but should be given only by an experienced masseur, as damage may be done if it is not administered judiciously. A very gentle and superficial rubbing with animal oil over the flanks will often decrease the disagreeable symptom of skin stretching so often complained of.

As the breasts increase in size, some

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\*Read before the Michigan State Medical Society at Manistee, June, 1908.

kind of a breast binder should be provided. It should be so adjusted as to make as little pressure as possible antero-posteriorly, but should aim to support the breasts from below upward. Edgar mentions an India gauze bodice used for this purpose. Hirst uses the Murphy binder. Some method of rendering the nipples less sensitive is a good routine measure, as, for example, the daily use of Compound Tincture of Lavender and Glycerine, applied with absorbent cotton, and combined with drawing out the nipples daily in the last few weeks of gestation.

As most women of the better class will wear corsets even if you caution them against it, it is well to advise them as to the variety. A large size of straight front corset, worn very loosely, adds very much to their appearance, and thus aids in your endeavor to have them take exercise. A carefully selected corset of this character will give support from below upward, just as an abdominal bandage will, and probably does very little damage in the first three months of pregnancy. Later than this a French maternity corset may be worn as being less stiff, and finally an abdominal bandage bought from the instrument maker will give much comfort.

Constipation, which is so common during pregnancy, can often be satisfactorily treated with Cascara Segrada tablets, giving from five to twenty-five grains every night, and cautioning the patient to try to establish a morning habit of bowel movement. This method has proved satisfactory a number of times, and though an occasional dose of a stronger cathartic may be necessary, the advantages (gradual decrease of dose) of cascara are usually evident.

The use of a tonic routinely, as recommended by Hirst, would seem at least capable of doing no harm, and a combination of iron, arsenic and strychnia works very satisfactorily in most cases,

the strychnia adding quite materially to the general muscular tone, and so encouraging activity, exercise, etc., and strengthening the uterine muscle.

Often the increased leucorrhœa at this time is very annoying, and can be satisfactorily treated by vaginal douches, which are not contra-indicated in a normal case. Bland solutions given with the douche bag very low, so as not to produce much pressure, are very useful and usually give much relief.

As to the general surroundings of a pregnant woman, she should certainly have all of the peace of mind possible and should be separated from irritating friends and relatives. I believe it to be a good plan to mention to the husband that during pregnancy women are often nervous and irritable and he should make allowances for her condition, explaining to him that the discomforts she is called upon to bear react upon her nervous system.

After the baby is born, there are still many details for us to attend to.

The abdominal binder probably has a specific use, in addition to its use of adding to the patient's comfort. The firm pressure applied by it prevents, in a measure, the great change in intra-abdominal pressure which would otherwise occur, and it also keeps up the pressure on the sympathetic nerves in the abdomen. As is well known, any sudden stimulus to these nerves is attended with marked symptoms. It is also claimed that the binder will prevent the sudden filling of the abdominal veins, splanchnoptosis, etc., while too tight application may, combined with the dorsal position, cause backward displacement of the uterus.

The diet after labor should be very light, for two reasons: first, because the patient has a uterus weighing about two pounds which has to be absorbed, (this being quite a source of proteid food for her); and secondly, because all of her

vital functions are at a low ebb.

There are some valuable suggestions in Hutchinson's *Food and Dietetics*, for this period.

The length of time the mother should be confined to bed varies, according to different authors, from one to three weeks, most of them advocating two weeks. As the normal puerperium occupies six weeks, which is the time required for the uterus to regain its normal size, it would seem that the womb would be quite heavy and its ligaments relaxed, even at the end of two weeks. In bipeds, when standing, as compared to quadrupeds, the uterus is always at a disadvantage as regards its normal position, and when, in addition, we have a large heavy womb with relaxed ligaments, generally stretched muscles and likely some laceration, it is not to be wondered at that twenty-five per cent of women have retrodisplacements of their uteri. (Halban). Hirst says that women must lie in bed until the involution of the uterus is so far complete that the

fundus uteri has sunk to the level of the symphysis pubis or below it. This would appear to be a safer rule than any definite length of time.

The pelvic binder, the last point to be discussed, is mentioned by Edgar, and is, to my mind, very useful and would likely prevent many of the cases of pelvic joint disease following labor. It is made of cotton flannel fitted to the pelvis with a perineal band and encircles the pelvis and lower abdomen. The binder should fit tightly and several should be provided (6); it should be worn from the time that the patient leaves her bed for three months. The following advantages are claimed for this method of treatment: It prevents or corrects undue sagging of the pelvic floor; assists in the ultimate union of severe lacerations of the pelvic floor which have been repaired; it preserves the woman's figure after confinement; it lessens the danger of displacements of pelvic contents, and in many ways adds to her comfort and welfare.

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#### A New Local Anesthetic.

John A. Wyeth reports that "A mixture of quinia and urea hydrochlorid has been demonstrated by Dr. H. Thibault, of Arkansas, to be a local anesthetic of great value.

"Its success has been amply demonstrated at the New York Polyclinic Hospital in a very interesting series of cases of which the following is typical: A male patient, 45 years of age, presented himself at the clinic with a well-marked epithelioma at the mucocutaneous juncture in the middle line of the lower lip. He was an habitual smoker, and the epithelial ulcer had developed at the point where he was in the habit of grasping the pipe-stem with his lip. The lower lip was infiltrated with a 2 per cent. solution of quinia and urea, using in all about one dram. By slow instillation, there was no pain beyond the initial puncture. Fully three minutes were consumed for the infiltration. The ulcer was then slowly and deeply burned out with the Paquelin cautery, the charred surface being fully one inch long and one-half to three-fourths of an inch in transverse measurement. The procedure was absolutely painless. It is believed that this local anesthetic possesses some advantages over cocain in that it may be boiled before using, thus ren-

dering it absolutely sterile without the necessity of any extra and expensive precautions in its preparation. It has been proved that there is a strong toxicity developed at times in cocain as a result of boiling.

"Injected into and beneath the skin in the same way as advised for cocain infiltration (a 2 per cent. solution for the endermic and a 1 per cent. for the hypodermic injection) it rapidly produces analgesia, the anesthetic effect lasting longer than that of cocain. Ten grains dissolved in one ounce of normal salt is approximately a 2 per cent. solution. It may be rendered entirely sterile by boiling, just before using; and so far, in the large number of cases in which it has been successfully employed, no constitutional symptoms have been observed. A 15 per cent. solution, applied on pledgets of cotton to an ulcerated surface, will render curetting painless. (Thibault.) A 10 to 15 per cent. solution applied to the mucous surfaces will also produce analgesia."

A powder of this combination has been prepared by a New York house for convenience in preparing extemporaneous solutions.—*New York Polyclinic.*



## REPORT OF AN INTERESTING BRAIN INJURY

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H. B. GARNER, M. D.,  
Traverse City.

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During the month of April, 1907, the three-year-old child of a farmer living about three miles from Williamsburg, walked beneath a running circular saw, the saw striking the head just above the

Dr. Bunce, of Williamsburg, had arrived first, and was waiting for me. The cut had bled profusely, the child was very weak and stupid, and appeared to be in a partially comatose condition; in



Fig. 1.  
Final result.

right eye, and cutting an incision nine inches long, dipping down into the brain, over two inches in places. I was notified of the accident and arrived about one hour and thirty minutes after it occurred.

fact we had no trouble in removing the hair from the scalp, and cleansing the affected parts without an anesthetic. An anesthetic was then given and normal salt solution used for cleansing; the wound contained a number of small

pieces of bone, strips of meninges, and fine saw-dust. After the wound was thoroughly cleansed, a gauze dressing and bandage was applied. The next day on removing the dressing we found a large hernia of the brain substance protruding from the wound, and in this substance many marks of the saw-teeth were noticed. The hot salt solution was again used and the friable mass crumbled off; again the dressing was applied, and the following day we found more brain substance protruding from the opening,

In a few days we were able to put in the remaining four inches of the plate, and every thing was going along nicely, pulse good, temperature practically normal, appetite good, paralysis improving, and prospect apparently good, when suddenly there was a chill, followed by a high temperature. We at once knew that pus was locked up somewhere in the brain, but the next thing was to locate it. On making a careful examination we found a deep sinus about three inches in length, just above the eye, and



**Fig. 2.**  
Appearance of wound after accident.

so concluded that a compress, in the form of a plate must be used in order to prevent further hernia. I informed a local machinist exactly what I needed, and he made a plate of aluminum nine inches in length, with a tongue in the center of the plate, which fitted tightly into the opening of the skull. I found that only about five inches of plate could be used, the remaining four inches contained two bad suppurating sinuses, which were kept well drained until healed.

on carefully probing we opened into a sac of pus. I ordered the machinist to put a plate on the end of a grooved director, in such a way that the director could be slid through the plate as it became necessary to shorten the drainage, from time to time. The sinus discharged profusely for several days, until a piece of the dura-mater about one inch in length was taken from the wound, after which the sinus closed quickly, giving no more trouble.

The plates were removed as soon as



the hernia was under control and scalp wound united. The accident occurred April 5, 1907, and the last dressing was made June 21, 1907.

The child made a perfect recovery, gaining full use of the paralyzed arm and leg, and is today in a perfect mental and physical condition.

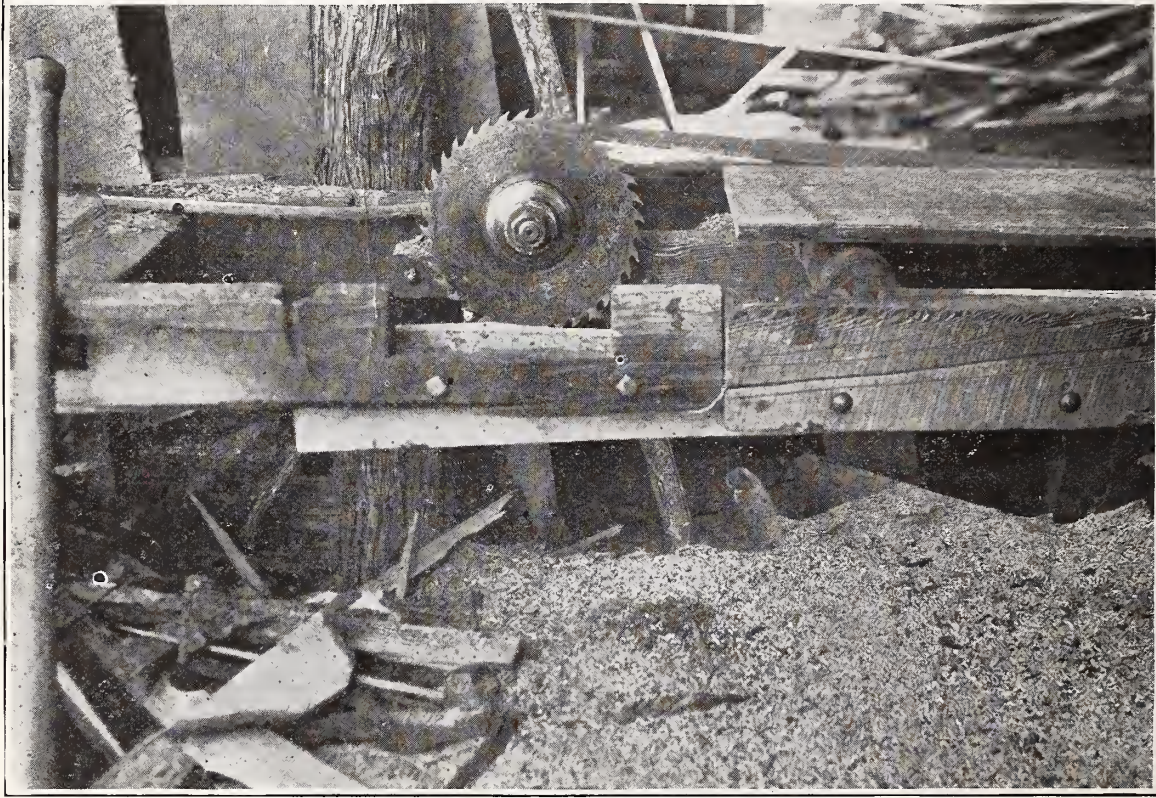


Fig. 3.  
Circular saw which made the wound.

**Short-lived Doctors.**—A medical contemporary, says *The Practitioner*, recently drew attention to the fact that doctors are a short-lived class of the community. Laymen were naturally surprised. Their view presumably is that the days of doctors should be longer in the land than those of other people because they know better than their patients what to “take” when they feel indisposed or are in the way of infection. Longevity, however, depends far more upon the manner of a man’s life than upon the drugs which he swallows; and it is the doctor’s misfortune that the exigencies of his calling often make it impossible for him to practice the hygienic doctrines which he preaches. *Obsta principiis* is one sound maxim on which it is specially hard for

him to act. He cannot afford to lay up and nurse himself for trivial ailments, but must often be out attending to his patients in spite of a general feeling of malaise. His night’s rest may often be broken though he knows that seven hours sleep is the ideal. He may have to take his meals irregularly, though he is well aware of the virtue of regular habits, or to rush out to an urgent case in the middle of his dinner, though he is always warning his patients that in that way lies indigestion. Moreover—if he is a general practitioner—those long holidays which he is fond of proclaiming to be essential are very seldom for him. All these disadvantages count for more in the long run than his acquaintance with the quickest means of relieving a headache or soothing a catarrh.



## The Journal of the Michigan State Medical Society

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JUNE

### Editorial

The economic loss to the community through Fourth of July injuries is realized by no one more keenly than the physician. Each succeeding year brings its toll of injury, crippling and death, and medical men see the worst features of this ill-directed patriotism. The prophylaxis of all Independence Day injuries should be our first concern; this should reach back, not merely to technical methods of antitoxin treatment and efficient surgery, but even to more fundamental and social measures of prevention. In other words the medical profession may well initiate a public sentiment which will compel legislation against the sale or use of dangerous articles. Such restrictions already exist in numerous places, but they are too few and not always well enforced.

County societies would do well to devote a meeting to the subject, and publish the proceedings in the press, especially directing the attention of their fellow citizens to the need of municipal control. If the daily press would lend their aid to publicity of this kind of accident rather than to accidents of vice and crime, or to hysterical accounts of automobile and street-car injuries, they would confer greater benefit. Their response to the persistent efforts of crusaders against tuberculosis is an example of what it is possible to accomplish.

In preparation for the Fourth of July clinics, every city which does not forbid noxious celebration ought to furnish antitetanic serum to physicians through its Board of Health or similar agency, and ought further to provide its charity clinics with every facility for treating this special class of cases, and advertise the fact to the public.



Every wound which suggests by its causation or character the possibility of tetanus infection should be treated by vigorous measures. Such wounds include those from toy pistols, blank cartridges, firecrackers, and penetrating or lacerating agents of any kind.

The injury should be minutely explored; if it is more than superficial, or if it suggests buried wad, or other foreign matter, it should be freely incised and every particle removed. The scattering propensity of gun charges must be remembered, else one is quickly satisfied upon finding a single plug of wad; to do such an exploration properly general anesthesia is advisable, especially in children, and a tourniquet should be used, in order to have a bloodless field. In this way minute traces of discolored tissue will often lead to unsuspected particles of foreign matter. When all pieces are removed, *do not cauterize* and *do not sew up the wound*. Carbolic acid and other caustics destroy superficial germs, but those that find deeper lodgment are not killed; on the contrary they are comfortably enclosed by the coagulating effect of the caustic, and have the best conditions for growth. These wounds may be thoroughly flushed with saline solution, and then should be packed with sterile gauze. At the time of operation antitetanic serum should be injected subcutaneously. The gauze packing may also be moistened with serum. If the injury is on an extremity, a suitable splint is advisable, to insure rest to the

part. One good purge is also helpful.



**Developed cases of tetanus** require treatment, the details of which are well set forth in numerous modern articles. The chief points are to be sure that the focus of infection is removed, the toxin combatted by antitetanic serum in sufficient dosage, the system supported by every means practicable, and the nervous phenomena controlled by whatever drug is most efficient. If morphine, chloral, bromides, and chloroform are ineffective, heroic dosage of chloretone may succeed, as reported by Hutchings, or intra-spinal injection of magnesium sulphate.



**Powder burns** are uncomfortable and disfiguring accidents of unwise celebrators. Prompt scrubbing with a stiff brush and soapy solution will usually remove the greater number of powder grains. It may be necessary to use a general anesthetic for this purpose. The grains not thus removed must be patiently picked out as soon as possible.



**Ordinary burns** need immediate cleansing, preferably by a one percent solution of sodium bicarbonate, and then a dressing of boric acid ointment, carron oil, or vaseline. Recent suggestions of picric acid, eosin, and scarlet red, are worth considering, in the event of failure with the older measures.



**Fees and Fee Bills.** Probably no other subject has so frequently caused trouble in medical societies as the discussion, adoption and attempted enforcement of a fee bill. This is obviously because a just fee bill has never yet been drawn up, simply on account of the fact that the method of charging so much per visit, regardless of the nature of the visit, and regardless of the circumstances of the patient, can never be just.

To charge no more for a series of visits made during the course of a serious and obscure malady than for a like number made for minor ailments, requiring little thought and no anxiety, is not right. Nevertheless, a patient is often more willing to pay a bill rendered for visits on account of separate illnesses, be they ever so simple, than one for the same number made during one illness, no matter how much worry, thought and study that sickness may have cost the physician. Should not the fee be in proportion to the skill required and the services rendered? Should not the fee for a typhoid case, for example, be a lump sum equal perhaps to that received by a surgeon for an ordinary abdominal operation?

Again, should not the man living in plenty on the interest of his money pay more for attendance upon a case of pneumonia in his family, than the laboring man whose income barely meets the necessities of the day? Should they each pay a certain sum per visit?

Are the services of a recent graduate necessarily worth as much as those of the man who has had many years of active experience? Or is the ten-minute consultation of the "busy man," even though he has had twenty years of active practice—a consultation in which he agrees to everything and "backs up" the younger man—worth as much to the patient as the careful history taking, painstaking examination and laboratory research of the younger man of better training but less experience?

Again, is the experienced obstetrician to spend a long and weary night for the same fee as the inexperienced. Should more be charged for "taking stitches" in a torn perineum, on the ground that it is a complicated case, whereas had the physician been more skillful no tear would have resulted?

Many other absurdities of fixed fees, as found in fee bills, readily come to

mind. All must agree that variable fees are just, honorable and unavoidable. They can never be fixed by a medical society or enforced, when once adopted. Every physician should see to it that his patients understand that he charges what he considers his services are worth, tempered by what he believes they, in justice to all concerned, are able to pay.

There is much to think over in Dr. McCormack's article on this subject in this issue, which is reprinted, not because we agree with all he says, but because the careful reading of it will probably convince many that they are not enjoying the income which they deserve.

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## Book Notices

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**A Text-Book of General Bacteriology.** By Edwin O. Jordan, Ph.D., Professor of Bacteriology in the University of Chicago and in Rush Medical College. Octavo of 557 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1908. Cloth, \$3.00 net.

This book is the outgrowth of the author's lectures at the University of Chicago, and as a book for beginners is especially to be recommended. The material is in such shape that it will also serve admirably as a book of reference.

The first eight chapters treat of the subject in a general way. These chapters are (1) Introduction with Historical Considerations; (2) Methods of Studying Bacteria; (3) The Structure and Mode of Development of Bacteria—The Composition of Bacteria; (4) The Effect of Chemical and Physical Agents; (5) The Effects Produced by Bacterial Growth; (6) Classification; (7) Bacteria and Disease in Animal Organisms; (8) Immunity.

Then the various species are taken up *seriatim*. The pathogenic protozoa are considered in Chapter XXX. Interesting sections are those on the "Bacteriology of Milk," "Bacteria and the Nitrogen Cycle," "Bacteria in the Arts and Industries," in which the bacteriology of tanning, of curing tobacco, of preserving foods and of vinegar making is taken up. The last chapter gives useful information regarding the bacterial diseases of plants.

The author's style is thoroughly scientific, yet never dry. This book will be found very acceptable by anyone wishing to begin reading on the subject or by him who is looking for a good book with which to review his bacteriology.

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**Applied Surgical Anatomy, Regionally Presented for the Use of Students and Practitioners of Medicine.** By George Woolsey, A.B., M.D., Professor of Anatomy and Clinical Surgery in Cornell University Medical College. 601 pages, 200 illustrations, including 59 plates, mostly in colors; cloth, \$4.50. Lea and Febiger, Philadelphia, 1908.

This book fulfills an excellent purpose, in that it gives the practical bearings of anatomy as they are daily encountered in medical and surgical work. These practical applications of anatomy make it interesting for they relieve it of much of its proverbial "dryness."

The author says in his preface that it is no longer possible to write an original work on the subject. Nevertheless there is abundant opportunity for the display of judgment in the selection of facts to be set forth, and, to our mind, this work is the best of the many of its kind, in that most excellent discrimination has been shown in this regard.

The author's diction is clear and to the point. He is never verbose. The excellent arrangement of paragraphs, bold face type and italics made the reading of the text easy and furnish a ready reference. There are 200 illustrations and 59 colored plates.

The book will not prove a disappointment.

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**Diseases of the Genito-Urinary Organs and the Kidney.** By Robert H. Greene, M.D., Professor of Genito-Urinary Surgery at the Fordham University, New York; and Harlow Brooks, M.D., Assistant Professor of Clinical Medicine, University and Bellevue Hospital Medical School. Octavo of 605 pages, profusely illustrated. Philadelphia and London: W. B. Saunders Company, 1908. Cloth, \$5.00 net.

The first edition of this book was reviewed at length in these columns in March, 1908.

The second edition has been considerably enlarged and very greatly improved. It is of a size to fairly adequately cover the subject, practically all matter of use to the practitioner being given in a concise and satisfactory manner. The authors have not confined themselves to such diseases as are generally met with by the genito-urinary surgeon, as is commonly done in works of a similar title but they have included as well the "medical" diseases, such as acute and chronic nephritis.



The illustrations are not elaborate, yet they serve to bring out the points desired perhaps as well as more finished drawings. About 30 of them are superfluous, being pictures of catheters, operating table, sterilizer, etc.

The text is somewhat marred by minor errors in English.

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**Essentials of Medicine.** A Text-Book of Medicine for Students Beginning a Medical Course, Course, for Nurses and for All Others Interested in the Care of the Sick. By Charles Phillips Emerson, M.D., late Resident Physician, The Johns Hopkins Hospital. 383 pages; 117 illustrations. Cloth, \$2.00. J. B. Lippincott Co., Philadelphia, 1909.

There has long been need of a book which could be put into the hands of the beginner in medicine, from which he might obtain a survey of the whole subject. Digests and compendiums there have been in plenty, but they all have the objection of being either too brief or too fragmentary.

In this book, Emerson has accomplished the difficult task of writing in a style to be understood by the freshman medical student or even by the layman, without in any way sacrificing the purely scientific side of the subject. The book is valuable mainly for the perspective which it gives. It deals with essentials, as its title indicates. If its contents are mastered, the reader will have a clear, incisive picture of the pathology and symptomatology of disease. Another advantage of the book is that it touches on the anatomy and the physiology of the organs under discussion is given to enable one to understand thoroughly all the points which are brought up on every-day practice.

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**The Practical Medicine Series.** Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the Editorial charge of Gustavus P. Head, M.D., Chicago. Price of the ten volumes, by subscription, \$10.00. The Year Book Publishers, Chicago, 1909.

The volumes of the Practical Medical Series are too well known to need extensive comment. The series covers the entire field of medicine, one appearing at about monthly periods. Those in charge of each subject are men of authority and the result is that the volumes are something more than a series of abstracts; they form a critique upon present day medicine. The series is primarily intended for the general practitioner, but separate volumes may be purchased by those who do not care for the whole set.

*General Medicine* under the charge of Billings, and *General Surgery* under the charge of Murphy have appeared in the 1909 series. They are better than ever.

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**Genito-Urinary Diseases and Syphilis.** By Edgar G. Ballenger, M.D., Lecturer in the Atlanta School of Medicine. 6x9 in.; 276 pages, with 86 illustrations. Cloth, \$2.00. E. W. Allen & Co., Atlanta, 1908.

This is a well written little manual, designed to give the essentials of the subject in a manner acceptable to the average student. Its teachings are sound. It is to be regretted that the paper chosen was not of better quality, for the press work and binding are good.

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#### Books Received.

**Conservative Gynecology and Electro Therapeutics.** By G. Betton Massey, M.D., Attending Surgeon to the American Oncologic Hospital, Philadelphia. Sixth Edition. Octavo, 462 pages; illustrated. Cloth, \$4.00 net. Philadelphia, F. A. Davis Co., 1909.

**Bacterial Food Poisoning.** A Concise Exposition of the Etiology, Bacteriology, Pathology, Symptomatology, Prophylaxis and Treatment of So-called Ptomaine Poisoning. By Prof. Dr. A. Dieudonne, Munich. Translated and edited with additions, by Dr. Charles Boldnau, Bacteriologist, Research Laboratory, Department of Health, City of New York. 128 pages. Cloth, \$1.00. New York, E. B. Treat & Co., 1909.

**Disorders of the Bladder with Technique of Cystoscopy.** By Follen Cabot, M.D., Professor Genito-urinary Diseases, Post-Graduate Medical School; Attending Genito-urinary Surgeon, Post-Graduate and City Hospitals, New York. 8vo, 225 pages; 41 illustrations, 1 colored plate. Prepaid, \$2.00. E. B. Treat & Co., New York, 1909.

**The Matter With Nervousness.** By H. C. Sawyer, M.D. 210 pages; cloth. Cunningham, Curtiss and Welch, San Francisco, 1909.

**Eradicating Plague From San Francisco.** Report of the Citizens' Health Committee. Prepared by Frank Morton Todd, Historian of the Committee, 1909.

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### County Society News

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#### Hillsdale.

At the last quarterly meeting of the Hillsdale County Medical Society, held on April 30, 1909, the following program was carried out:

1. Glandular Fever, S. B. Frankhauser, Hillsdale.
2. Complications of Scarlet Fever, H. H. Frazier, Moscow.

3. The Physiological Chemistry of the Salines, F. M. Gier, Hillsdale.

4. Psychotherapy, or a Common Sense View of Modern Faith Cure or Mental Healing, Rev. W. F. Jerome, Hillsdale.

The papers were of unusual merit and were freely discussed.

It was voted to hold the next regular meeting at North Adams.

B. F. GREEN, Sec'y.

#### Huron.

The Huron County Medical Society held its regular quarterly meeting May 19th, in Bad Axe. Dr. D. Conboy read a paper on "Some Interesting Homeopathic Remedies" and Dr. H. W. Pfaff read one on "The Care and Repair of the Auto." Both papers were thoroughly discussed.

This Society gives notice that it is actively hostile towards the itinerant quack and medical tramp.

D. CONBOY, Sec'y.

#### Ontonagon.

The annual meeting of the Ontonagon County Medical Society was held at the home of Dr. W. B. Hanna, Mass, on March 26, 1909. The following officers were elected:

President, Dr. E. J. Evans, Rockland; Vice-President, Dr. W. B. Hanna, Mass; Secretary-Treasurer, Dr. E. W. Knowles, Victoria.

A resolution, protesting against the proposed Optometry Bill, was passed and forwarded to the Committee on Legislation.

E. W. KNOWLES, Sec'y.

### Special Article

#### A General Plan for a Schedule of Medical Fees

J. N. McCormack, M. D.

[Reprinted from The Journal of the American Medical Association.]

I have long held the opinion that it was feasible to frame a plan for a schedule of medical fees which could easily be modified, as to the amount of the charges and other details, to meet the conditions and needs of almost any county or locality in any section of the country. As the plan I have in mind would be for the information, guidance and benefit of the public quite as much as of the profession, it involves conferences and a full understanding of the people of

the community beforehand, as well as the fullest possible publicity afterward, through the public press, placards in each office, and otherwise, the explanatory footnote being made an essential part of every publication.

One of the main difficulties about this in the past has been the almost universal, but wholly erroneous, opinion and insistence on the part of both profession and laity that all the physicians of a community have an equal value and should make the same charge for their services. We know full well, and in a way and to an extent that the people can not that nothing could be further from the truth. Because of the faulty system of medical education, loose medical laws, and lack of organization and incentives to study, in vogue in this country until recent years, there are regularly licensed physicians in almost every community in the United States, in cities and towns quite as abundantly as in the country districts, who are well paid for all they know or can do for their patrons when they receive anything, and I insist that the time has come for us to deal frankly and openly with each other and the public about this and all other matters of common interest. It is essential to the success of such a plan, too, that we abandon once and forever the antiquated notion of penalties for those who do not live up to the schedule, or blacklists for those who do not pay for services. Such harsh methods are contrary to the spirit and purposes of real organization and, in the very nature of things, can only be productive of misunderstandings and odium.

I have made rate-cutting and cheap doctors a matter of special study in every section of the country for years, and have come to have much sympathy for this class. On getting down to bottom facts, I have always found that they charged less for their services because they honestly knew, better than anyone else did or could, that they were worth less than their competitors, and that this was their only chance to obtain or hold practice. There may be exceptions to this, but I have never found one that would bear investigation. They have my sympathy for another reason. As with the division of fees and commissions, contract and lodge practice, the use of proprietaries and nostrums, and similar mistaken practices and policies, all more hurtful to the people than to the profession, the fault is far more with the schools which pretended to educate these men than with them. In fact, without proper instruction about these matters during

student life, so as to make it part of their very being, just as important to the future physician and his patrons as instruction in anatomy or physiology, and sometimes with bad examples from their teachers to start them in the wrong direction, the wonder is that more of them do not do worse. These are just the men who need the uplifting influences of county societies and post-graduate courses, they are actual entities with which we must live, associate or contend, and with tact and judgment many of them can be made competent. To suspend or expel them is far more of a punishment to their innocent patrons than to them, and it destroys the only chance of reclaiming them.

What is first and most needed in dealing with this class, for their own good as well as of the people, is to raise their earning capacity, to make them better practitioners and better men, by means of consistent, persistent post-graduate study, and by the influence and example of the higher grade members, in every county society and in such intercourse as comes in daily practice, and then in leading them to the adoption of systematic business methods and aiding them in other ways of securing better compensation. If we could substitute common sense plans of co-operation, the idea of a real community of interests, of practical, kindly helpfulness, such as is common between lawyers, in the place of the habit of fault-finding, jealousy and aloofness which is still as easy to find as it is disgraceful between the physicians of many communities, the difficulties of this entire problem would be reduced to a minimum.

The county societies and post-graduate courses furnish the facilities for doing the scientific and social features of the work. For the business side of it I am advising that the profession in each county or city consider the advisability of arranging for systematic monthly collections, with a carefully selected business representative, and a centrally located "medical collector's office," the collector to be under bond, and on a definite salary, and with authority to appoint as many assistants as may be necessary, for whom he is responsible, very much as sheriffs and city collectors do. The collector should be a man of tact and judgment, he should hold the affairs of each physician as strictly private and confidential, and he should be well paid. This plan should not be tried anywhere until good scientific work is well under way and a spirit of harmony secured, until all of the details have been worked out

with the kind of business representatives indicated, and until public sentiment is prepared for it. Even in large cities the plan is worthy of consideration for colony and office buildings, wards or other convenient groups, if it can not be made available for the entire profession. It will not be easy to do these things in any community, in fact, it is never easy to do any important reform work which is worth doing, but with such preparatory work as has been suggested, and with tact and judgment in the earlier steps, I am convinced that the plan could be made as pleasant and convenient for the people as it would be helpful and profitable to the profession.

In most parts of the northwest and on the Pacific coast the rate of charges sanctioned by custom is sufficient to sustain a competent and equipped profession, but in many sections of the eastern, middle and southern states, outside the large centers of population, and for a large part of the profession in them, all except the surgical fees are wholly inadequate, and this is operating to the disadvantage of both the profession and people now in a way unknown to our forbears. This county in recent years has passed through an era of most remarkable prosperity, but physicians and other professional classes have not shared in it. With the cost of living almost doubled, and the cost of equipment for modern practice quadrupled, the income of medical men, except surgeons and specialists, has remained about stationary. Properly interpreted, poverty in the profession, and the lack of equipment and and practical incompetency inseparable from it, is just as important to the public as to us, and the subject should be boldly discussed in public meetings and in the periodical and daily press until this real, positive danger to the people is a matter of common knowledge. Not only the higher standard of competency, but the increased usefulness of the profession in other ways should be made plain. It now probably does more real charity than all the other vocations combined, but the generous support to which it is entitled, and which is demanded by the highest humanitarian interests, would enable it to do a systematic, intelligent, discriminating relief work which is now impossible. To an extent not dreamed of by the laity, or even by many in the higher ranks of the profession, a large per cent. of the physicians in this country, in cities and towns as well as in the rural districts, on account of poverty and the pressing needs of their own families, are



daily forced to take what is almost blood-money from a class of widows, teachers and working women, in their times of affliction, whose incomes are so scanty when well, that it would and should be an honor and a pleasure to make them the specials wards and beneficiaries of a properly supported profession.

The opportunity has come to me to study this whole question as no other man probably has ever been able to do. I am giving the results of this broad experience in my public talks every evening, and find, in the lay discussion which follows, that the people can be made to appreciate our difficulties and their dangers quite as readily as can the profession. In truth, unpleasant as is the admission, the trouble is with us and not with the public, as is true in regard to almost every other evil from which we suffer. If the physicians competing for the same practice in every section of the United States could really get together in all these matters, and then take the people into their confidence, the balance would be comparatively easy, as there are not enough of them to do the practice if every patient was given the time, and the kind of scientific examination and treatment, to which they are entitled.

For many reasons, any schedule intended for general adoption should cover only the ordinary fees for general practitioners, and non-operative office work. Surgical fees are usually the subject of special arrangement, and, anyway, they vary to such in extent that an attempt to include them would give the public an exaggerated and misleading notion of what is received by the ordinary surgeon, or by any of them except under extraordinary circumstances, and would do more harm than good. As a rule, too, surgeons and specialists are better paid and are well able to take care of themselves. Besides, my experience has convinced me that it is the field of general and office practice, with the hard-worked and under-paid ordinary practitioners, that the pressing need for reform exists.

For obvious reasons the schedule should be adopted by the profession as a whole, or as individuals, and not by the county society. The provision in the by-laws forbidding such action by the societies was inserted after careful consideration, was certainly wise under the conditions then and still existing, and probably should be permanently retained. The membership in most societies embraces only about from one-half to three-fourths of the physicians of the county.

While it is probable that all, including the former sectarians, will finally come in, this will be the work of years, and although not absolutely essential, it is important that the schedule be agreed to practically by all of the active physicians of the jurisdiction, whether members or not. Besides, this has been one of the most fruitful sources of discord in societies in the past, often provoked by those who took least interest in the scientific proceedings.

With all the foregoing considerations in mind, and after the matter has been fully discussed with the people, the schedule and footnote, in their main features, are suggested only as the basis for discussion. The rate of charges will seem too high for some sections and entirely too low for others. I am proposing about what, in my judgment, would be fair and equitable at the present cost of living and equipment in the central, middle, western and southern states, but, of course, the exact fees and other details must be arranged for each community in accordance with what is deemed just and proper. The rates should not be too hard and fixed. There are people of moderate circumstances in almost every community, factory operatives and others, who ought to pay something, and yet should not pay full fees, and a wise discretion on this and similar points must be provided for in any plan which is to be comprehensive and successful.

The order of arrangement and the items of practice included are as seems best suited for most counties and communities, but the purpose is to make it so simple and flexible that it can be altered to suit varying conditions and views. For instance, if it is thought best, fees for fractures and dislocations, or any other surgical or special work, can be easily added. It will be noted that a broad distinction is made between ordinary and complete office examinations, including a thorough examination of the chest, urinalysis and other like work involving extra time and skill. My own opinion is that a double charge should be made for night practice for well-to-do people, but I have yielded to the views of others on this point. Telephone practice is so annoying, exacting and unsatisfactory that it certainly should be paid for except where regular visits are being made, and in all cases after bedtime. Consultations are purposely made low in order to develop and encourage this variety of practice.

The form of schedule suggested and the footnote, as they should go on the placard, are as

follows:

SCHEDULE OF MEDICAL FEES FOR ——— COUNTY.	
1. Day visit in town.....	\$ 2.00
2. Night visit in town.....	3.00
3. Day visit in country, first mile, \$2.00; each after mile, one way.....	1.00
4. Night visit in country, first mile, 3.00; each after mile, one way.....	1.50
5. Ordinary office examination and advice.	1.50
6. Complete examination and advice.....	5.00
7. Advice or prescription by telephone...	1.00
8. Obstetric case, uncomplicated, not over six hours .....	15.00
9. Life insurance examinations.....	5.00
10. Consultation, double ordinary visit....	
11. Surgical and other special fees as may be arranged.	

EXPLANATORY NOTE.

This schedule of fees is purely advisory. It is arranged and published for the information and guidance equally of the profession and people. It is intended to suggest the fees for ordinary services by competent physicians, for those fully able to pay their bills. It in no way applies to practice for the deserving poor, of which all agree to do their full part. It may be that physicians who are less competent will feel that they should charge less for their services. This is recognized as just, and to do so will in no way affect their society membership or professional standing. It is especially important that these less fortunate members should have the benefit of the postgraduate study courses and other scientific work of the county society, which are free to all, for their own good as well as that of their patrons, and regular attendance at these meetings should be made a condition of continued employment. Night fees are made higher for many reasons, but more especially to give time for such study and society work as is essential in keeping a physician competent to practice with safety to the people. For the convenience and benefit of both the profession and its patrons, systematic monthly collections, in so far as possible, are requested in the future. It is believed that it will be more satisfactory to families to settle their accounts while they are small, and while they remember and are grateful for the services, and it will enable physicians to keep equipped for far better service.

News

There are only four states in the country which still admit non-graduates of medical colleges to practice; they are Arkansas, Massachusetts, Mississippi, Tennessee.

In Iowa the State Sanatorium for the Treatment of Tuberculosis has secured an appropriation of \$55,000 for new buildings. For maintenance during the next two years \$96,000 is

available, while \$10,000 is devoted to lectures and education of the public.

Dr. George M. Crile, of Cleveland, read a paper on "Surgical Anemia and Resuscitation" before the Detroit Academy of Medicine April 13.

The Ionia County Medical Society has passed resolutions binding its members to avoid writing prescriptions for intoxicating liquors to be used as beverages.

At the annual meeting of the Wayne County Medical Society the following officers were elected: President, A. D. Holmes; vice-president, P. M. Hickey; secretary-treasurer, G. A. McFall (re-elected); directors, F. W. Robbins, Wadsworth Warren, S. G. Miner, R. W. Gillman, G. E. McKean; executive board of Defense League, F. B. Tibbals and Johann Flinterman, re-elected.

Dr. Perry Schurtz has been made president of the Grand Rapids Board of Health.

The following papers were read by Michigan men at the meeting of the American Medical Association, Atlantic City, June 8-11:

"X-Ray Evidence in Gastric Cancer," A. W. Crane, Kalamazoo.

"The Value and Limitations of Salt Free-Diet and Restriction of Fluid in Nephritis," V. C. Vaughan, Ann Arbor.

Chairman's address in Section on Obstetrics and Diseases of Women—"Mental Alienation in Women and Abdomino-Pelvic Disease," W. P. Manton, Detroit.

"Tetanus Developing Twelve Days After Shortening of the Round Ligaments—Recovery," Reuben Peterson, Ann Arbor.

"Final Word on the Stem Pessary for Dysmenorrhea, Amenorrhea, Sterility, Etc.," J. H. Carstens, Detroit.

"The Visual Fields in Hysteria; a Clinical Study of Fifty Cases," Walter R. Parker, Detroit.

"Visual Disturbances in Multiple Sclerosis," Theo. Klingman, Ann Arbor.

"Allochiria," Carl D. Camp, Ann Arbor.

"Some Observations on the Pharmacologic Action of Ergot," E. M. Houghton and H. S. Yutema, Detroit.

"Cardiac Thrombosis; the Clinical and Pathological Findings in Four Cases," Frank Smithies, Ann Arbor.

"The Rate of Blood Flow in the Arm," A. W.

Hewett and J. G. Van Zwaluwenburg, Ann Arbor.

A new medical society, the members of which are ex-interns of Harper hospital, was recently formed, and will be known as the Alumni Society of Harper hospital. The society has a membership of about 125 and includes many of the leading men in the profession located in Detroit as well as in other cities and in the United States army and navy. The society will hold two meetings each year. The officers elected are: Honorary president, Dr. H. O. Walker; president, Dr. Angus McLean; first vice-president, Dr. C. W. Barrett, Chicago; second vice-president, Dr. P. M. Hickey, Detroit; third vice-president, Dr. Earl S. Bullock, Silver City, New Mexico; secretary-treasurer, Dr. Alex. W. Blain, Detroit; executive board, Drs. C. D. Brooks, William G. Hutchinson, A. D. McAlpine and C. P. Clark.

During July and August *The Medical Era* of St. Louis will issue its annual series of issues devoted to gastro-intestinal diseases. The July number will take up the usual bowel disorders of hot weather and the August will be devoted entirely to typhoid fever. These issues always attract considerable attention. The editor will forward copies to physicians applying for same.

County secretaries should send to Dr. F. C. Warnshuis, of Grand Rapids, for sample copies of the *Bulletin of the Kent County Medical Society*.

A complimentary dinner was given, June 1st, to Dr. C. J. Ennis, of Sault Ste. Marie, on the occasion of his completion of twenty-five years of practice. The committee in charge consisted of Drs. McDonald, Rogers, Bennie, Townsend and Gostanian.

About 80 candidates took the state board examination in Detroit May 24th to 26th.

Dr. A. P. Ohlmacher, of Detroit, read a paper at the New York Academy, May 6th, on "Acute Pulmonary Edema as a Terminal Event in Certain Forms of Epilepsy."

Dr. Fred Townsend, of the Soo, assistant surgeon of the U. S. Marine Hospital Service, was recently appointed by the board of trustees consulting surgeon to the Upper Peninsula Hospital for the Insane, Newberry.

Physicians visiting the Alaska-Yukon-Pacific Exposition at Seattle may have their mail sent

in care of the Emergency Hospital at the grounds.

Measles has recently been epidemic in Manistee. The following letter from the secretary of the state board of health in this connection may be interesting to some readers:

State Board of Health,  
Lansing, Mich., May 17, 1909.

Dr. S. Szudrawski,  
Health Officer of the City,  
Manistee, Mich.

My Dear Doctor:—Replying to your letter of May 15 let me say that you are doing just the right thing in taking precautionary measures in cases of German measles as they are just as contagious as the regular form of measles and for public health purposes we class them with measles, and you are doing exactly right in placarding and disinfecting for all such cases.

Very truly yours,  
DR. F. W. SHUMWAY,  
Secretary.

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## Marriages

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Frank E. Thomas, M. D., of Mason, to Miss Ada Lyon, of Bowbells, N. D., April 20.

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## Deaths

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John William Caughlin, M. D., of Bay City, ex-president of the Bay County Medical Society, a member of the local board of pension examining surgeons, and for eight years president of the local board of health, died at his home, April 20, from nephritis, aged 53.

Harvey Williams, M. D., for many years a practitioner of Saginaw, died at his home, April 22, from cardiac dropsy, aged 63.

John Duboise North, M. D. died at his home in Jackson April 30, from tumor of the esophagus, aged 75.

Ebenezer Everett Fisher, M. D., of Old Mission, died in Traverse City, April 27, aged 66.

James Warren Freeman, M. D., died at his home in East Saginaw, May 3, from inflammatory rheumatism, aged 80.



Daniel S. Skinner, M. D., of Saline, died in St. Mary's, Ontario, from heart disease, April 19, aged 51.

Harison A. Nichols M. D., died at his home in Plymouth, April 30, from cerebral hemorrhage, aged 63.

Martin S. Dowling, M. D., died at his home in Leslie, April 27, aged 71.

I. Winslow Ayer, M. D., of Northville, died in the Wayne County Asylum, April 29, aged 83.

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### Correspondence.

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The Journal of the Missouri State Medical Association.

St. Louis, May 23, 1909.

To the Editor of The Journal Michigan State Medical Society,

502 Washington Arcade,  
Detroit, Mich.

Dear Doctor:—I observe in your issue of May, 1909, a statement in the editorial under the caption of "The Cost of Medical Defense" that "Iowa and Missouri each levy an assessment of one dollar per year." I beg to inform you that so far as Missouri is concerned this statement is incorrect. Legal defense is furnished our members without any assessment whatever; it is one of the privileges which all members enjoy upon payment of the regular annual dues of \$2.00 each. Last year the method was put into operation, although only on trial. It was so successful that this year the by-laws were amended so that medical defense is now a part of the constitutional right of each member, still without any extra assessment or increase of dues. One thousand dollars was appropriated from the general funds of the association for the use of the defense committee in protecting members against civil suits for malpractice.

Trusting this information will be of some service to you in future comments upon the medical defense feature of the Missouri State Medical Association, I beg to remain,

Very truly yours,

E. J. GOODWIN,  
Editor.

No county society has done its full duty toward the profession of the county unless it has given every eligible, desirable and reputable physician in the county an opportunity to become a member of the organization. Regardless of personal feelings, every physician in the county who comes within the membership restrictions, laid down by the state society, should at least be asked to affiliate with the organized profession of his county. Not only should this be done once, but repeatedly and as often as necessary, until the society embraces every physician in the county whose presence will be an addition to the organization or who needs the society for his own improvement. As we have urged in the past, we again desire to urge our membership to carry out the above suggestion and make it a special object to obtain the application of some one of your medical friends who are not already members.—*Kent County Bulletin*.

Small lodges and mutual aid societies are still furtively glancing about for some cheap doctors to do their contract work. They do not search for grocers, or meat dealers, or tailors, or dry goods merchants, to supply them and their families with the necessities of life whenever required, upon payment of one dollar per year for each family. Owners of houses are not asked to grant them the privilege of moving into their rooms should it be found necessary to make a change of residence. But physicians are such negligible factors in our body politic that many can be found in every community who will prostitute their skill and knowledge for a beggar's pittance. 'Tis a great pity!—*Cincinnati Lancet Clinic*.

The value of medical societies, especially to the young physician, is immeasurable in many ways. How many medical colleges convey a knowledge of this fact to their students? Are there a dozen in the whole country? To the shame of the colleges, no! Correct conduct as a physician in little things and big, toward his patients and toward his confrères, making for happiness and success. Are there a dozen medical colleges in the country that appreciate this? No, "All that is necessary is that a man should be a gentleman" is the excuse, but this is not true. The medical code is broader than the social code.—*Jour. A. M. A.*

## Progress of Medical Science

### MEDICINE.

Conducted by

T. B. COOLEY, M. D.

**Diabetes Insipidus.**—ENGEL reports some careful observations on cases of genuine diabetes insipidus and polyuria from other causes, designed to demonstrate the theory of Tallquist, Meyer and others, that the primary symptom in this disease is a polyuria, dependent on a characteristic disturbance of water metabolism, which may be called a loss of the power of concentration on the part of the kidney—an inability to secrete any but a very dilute urine. In such a condition water would be withdrawn from the tissues in proportion to the urinary solids to be excreted and irrespective of the water intake, and thirst and polydypsia would be secondary. The urine would vary in amount in close proportion to the intake of solids to be excreted by the kidneys, and the concentration would be nearly constant. In polyuria from other causes, the amount of urine varies quite directly with the water intake, and is largely independent of the amount of solids, so that variations in quantity are usually less marked, while the concentration shows wide fluctuations.

Seven cases are described—four of diabetes insipidus, and three of polyuria from other causes. In all of them careful records were made of quantity and concentration of urine under different experimental conditions—varying diets, administration of such salts as sodium chlorid, withholding water, etc. Concentration was determined by the lowering of the freezing point.

The four cases of diabetes insipidus gave results corresponding in every way to the theory. There were wide variations in quantity of urine, but the concentration changed little, and was always much below normal. Giving salt and withholding water caused extreme discomfort, soon becoming unbearable; the refractive index of the blood was much increased, but the urine concentration was practically unchanged. In the other group of cases there was no sign of constancy of urine concentration, and the patients could nearly always voluntarily refrain from drinking to the point where the concentration was practically normal. Moreover, drugs which ordinarily diminish the water diuresis or increase the molecular diuresis had little or no effect in the diabetes cases, while on the other hand after a single ingestion of a large amount of water the resulting dilution of the urine was less than normal, and appeared later. That the inability of the kidneys to excrete concentrated urine was not absolute was demonstrated in one case by the elimination of urine of normal concentration during an intercurrent fever, and in two others by a moderate increase in concentration after prolonged withholding of water or administration of salt. Drugs, such as strychnin, atropin, and

antipyrin, were found useless in these cases.

The etiology of the condition is still obscure. Autopsies have demonstrated the absence of anatomical changes in the kidney. The ordinary cause of polyuria—namely hydremia resulting from excessive drinking, does not exist here, as the polyuria is primary and hydremia does not occur, the blood being on the contrary nearly always concentrated. ENGEL inclines to the theory that the polyuria is the result of a continual nervous stimulus originating in the cord and acting upon the kidney, and cites cases of disease of brain or cord in which precisely similar symptoms have been observed.—*Zeitschr. f. Klin. Med.*, Vol. 67, P. 112.

**Effect of the "Yoghurt" Bacillus on B. Coli.** VON KERN reviews the literature regarding the lactic acid bacilli as intestinal antiseptics or stimulants to digestion. It is generally admitted, and apparently proved experimentally, that certain animals thrive better under the administration of sour milk, and that the constituents of the urine resulting from intestinal putrefaction are distinctly diminished.

There are three main theories as to the reason for this. Metchnikoff and his school ascribe the results observed to a direct inhibiting action of the living lactic acid organisms, especially the "Yoghurt" bacillus (*B. Bulgarus*) and *B. Paralacticus*, upon the growth of the *B. Coli*. Others believe that lactic acid and its salts and possibly some other products of the lactic acid bacilli, have this action, even after the germs have been killed by heat; while a third group believes that the effects are due wholly to the stimulus given to the digestive processes by the acid milk. Von Kern's experiments were directed to the question whether the *B. Bulgarus* has any real inhibiting action on the growth of *B. Coli*, in vivo and in vitro. His experiments on the living person consisted in counting the colonies of *B. Coli* in a given amount of fecal matter with and without the administration of sour milk. He found them always much diminished in number under sour milk. In vitro, he tried the addition of the toxins of *B. Bulgarus* to cultures of *B. Coli*. In the first two cases the inhibiting action of *B. Bulgarus* was evident, but not very marked, while the effect of the toxins was very decided. He concludes that sour milk, especially when prepared with *B. Bulgarus*, the most active of the lactic acid group, is distinctly indicated in acute and chronic intestinal disturbances with fermentation, in diseases of the stomach with insufficient secretion, and the accompanying intestinal disorders, and especially the "achylic" diarrheas.—*Zeitschr. f. Klin. Med.*, Vol. 67, P. 211.

## SURGERY.

Conducted by

C. S. OAKMAN, M. D.

**Experimental Studies of Post-Operative Peritoneal Adhesions.**—GELLHORN, St. Louis, carried out experiments upon dogs and rabbits, to determine the effect of lanolin in preventing adhesions. He reviews the chief attempts made with other products, and the successes and failures encountered with each, viz.,—normal salt solution, absorbable membranes of animal origin (Cargile, etc.), non-absorbable membranes (collodion, aristol, etc.), thermo-cauterization, thio-sinamin (fibrolysin), physostigmin, phosphorus, peptone, adrenalin, liquor aluminii acetic, olive oil, paraffin, gelatin, tallow, mucilage. None of these methods has been uniformly successful but the author thinks that Vogel's use of gum arabic mucilage is the most encouraging of all; it is indifferent to the organism, capable of sterilization, is non-coagulative, and is similar in effect to the normal slippery secretion of the intestinal serosa.

The author began his own experiments with lanolin before he was aware of Vogel's work. His method of procedure was to do a median laparotomy, under the fullest possible aseptic conditions; the anterior wall of the stomach was then scraped with a knife, and in several places strips of peritoneum removed; the parietal peritoneum was scraped in a corresponding position. The lanolin, previously sterilized by boiling and kept liquid on a water-bath, was then poured upon the raw surfaces, and the stomach at once sewn with linen to the anterior parietal peritoneum, and the incision closed. This insured the greatest likelihood of adhesions resulting. control experiments were done on animals as nearly similar as were obtainable, using the same operative procedure, but omitting the lanolin.

An analysis of his experiments showed that in the "control" animals extensive adhesions usually resulted between the stomach and anterior parietes. In the majority of cases where lanolin was used there either were no adhesions or they were less extensive. In discussing his failures, the author considers that in animals it is difficult to obtain anything better than a relative asepsis and that a certain number of adhesions must be ascribed to this. Secondly, the artificial means taken to produce adhesions were much more severe than usually occurs in the human subject, and therefore the few failures may be regarded leniently. Thirdly, three animals were treated with lanolin combined with 2% boric acid, and two of these showed the worst adhesions, so that boric acid may be suspected of the fault.

In summarizing the treatment of post-operative adhesions, GELLHORN states that the multitude of causes demand a multitude of preventive measures, and recommends, therefore, the following precautions:

1. All prophylactic measures mentioned in connection with primary adhesions.

2. Bier's hyperemia, in the form of dry heat.

3. Hypodermic injection of fibrolysin or thio-sinamin.

4. Drainage with the liquor of aluminum acetate, after certain vaginal operations.

5. Prompt provocation of peristalsis by hypodermic injection of physostigmin, together with improvement of the passive mobility of the intestines by means of mucilage.

6. Interposition of lanolin, provided further experiments will prove its harmlessness to the human organism and efficacy as to the prevention of adhesions.

The author disclaims any great importance attaching to his report, because his work was too meagre to base conclusion upon; he offers the work as suggestive for further investigation, and calls attention to the fact that Busch and Biebergeil likewise had favorable results with lanolin.—*Surgery, Gynecology and Obstetrics*, May, '09.

**The Use of Fluorescent Salts (Eosin, Scarlet Red, Etc.) in the Practice of Surgery.**—

V. PLETH and V. W. PLETH, of Guadalajara, Mexico, have experimented upon animals and human beings along the line suggested by the work of V. Toppeiner and Jesionek, Adier, Noguchi, Flexner and Schmieden. Certain fluorescent substances, like eosin and magdala red, are inimical to the growth of fungi, and this action is best produced under the influence of sunlight. The authors, during the past year, have used extensively eosin and scarlet red in treating pus infections and skin defects. The eosin was used especially as a bactericide, in conditions such as granulating wounds, stitch abscesses, osteomyelitis wounds, eczema, gonorrhea, actinomycosis, tuberculosis, endometritis, accessible cancer, buboes. Superficially it was applied in 5 to 10% aqueous solution, covered with a thick layer of cotton to keep out dust, and then exposed to sunlight as much as possible. It was noted that, as near as could be decided clinically, cases thus treated healed much quicker than by other methods, and some cases were cured which had theretofore resisted all other treatment. In the deeper inflammations and cancer 5% eosin was injected. In animal experiments the cases treated by eosin and sunlight all healed quicker than those not so treated.

The scarlet red was used as an epithelial stimulant and had a remarkable effect in hastening the growth of epithelium. It was used suspended in olive oil, vaseline, or in zinc oxide ointment in the proportion of 5 to 10%.—*American Journal of Surgery*, May, '09.



## PHARMACOLOGY AND THERAPEUTICS.

Conducted by

H. A. FREUND, M. D.

**Splanchnoptosis or Glenard's Disease.**—In discussing the treatment of this not infrequent condition BROWN points out the fact that the undoubted tendency has been to ascribe far too many symptoms to the displacement of certain organs, notably the kidneys and the uterus, and far too few to the stomach and intestines.

He states that the general practitioner and pediatricist should recognize the frequency of the condition, and should attempt by the means suggested to minimize its manifestations in those congenitally predisposed; that the surgeon should realize that in most cases this is a medical, not a surgical disorder, and that the stitching up of the kidney is a most irrational means of treating general displacement of the abdominal viscera; that gynecologists should not forget that in many cases a retroflexed uterus is but a part of a general splanchnoptosis, and that it is not rational to expect a disappearance of symptoms by the suspension of this organ alone.

The diet in splanchnoptosis largely depends upon the degree of the involvement of the stomach and intestines. Ample nutrition to increase the body-weight is most important, and this is best obtained by following a simple mixed dietary, with little fluid at meals, while often between meals raw eggs and milk can be given; in other cases the patient may be put at first on an absolute milk diet, associated with rest, such as the Weir Mitchell or Dubois treatment. We must always be extremely careful not to overload the stomach and increase the tendency towards dilatation, and for this reason it is often advisable to make the patients lie down for some time after each meal. We should advise against wearing tight clothing, especially that which constricts the lower half of the thorax, while great benefit may be derived from carefully selected outdoor exercises, or Swedish movements, although here again we must be very careful not to advise too violent exercises until the abdominal muscles show distinct improvement in tone.

Patients should be taught the proper mode of breathing and standing, and massage should be given if the patient can afford it; for those who cannot the so-called cannon ball massage has proven very effective. In cases where the stomach is particularly involved, especially if associated with dilatation, remarkable results may often be obtained by a combination of careful dieting with absolute rest. Hydrotherapy often helps both the gastro-intestinal and nervous symptoms, while gastric lavage and rectal irrigation are sometimes helpful in selected cases.

As to the medicinal treatment of splanchnoptosis this should play a very minor role. In treating the constipation so frequently met with, massage, electricity, exercise, diet and hydrotherapy should first be tried; if these are not effectual enemata may be given, especially those of oil, while if laxatives are necessary we may use any of the simpler saline or vegetable laxatives.

In the hands of most clinicians the use of various mechanical supports in association with the measures already described has proven of great value. The objects of these supports is to lessen the volume of the lower half of the abdomen and to increase the intra-abdominal pressure; and to get satisfactory results it is essential that the corset or belt be applied with the patient in the inclined dorsal position, so that the various viscera are in their positions of least descensus, for we must not forget that if the support is not well made or is improperly applied it may not only do no good, but do real harm and increase the degree of descensus.

It has always been a moot question whether splanchnoptosis is a medical or surgical condition. It seems to us that in the majority of cases it is medical, only to be treated surgically when the symptoms are so definitely referable to one or two organs that their suspension will offer a good chance of the disappearance of the symptoms, or in those cases in which hygienic, dietetic and mechanical measures have been faithfully tried without success.—*International Clinics*, Vol. 4, 1908.

## PEDIATRICS.

Conducted by

R. S. ROWLAND, M. D.

**Acidosis in Girl of Nineteen Months—Death.**

—HALE reports a case terminated fatally after an illness of four days. There was a terminal temperature of  $103.8^{\circ}$ , and death was ushered in with a convulsion.

Since this experience HALE states that his attitude toward finding this condition has completely changed. He now gives at once from two to four teaspoonfuls of milk of magnesia at times repeated in a few hours, orders soda bicarbonate or carbonate, by mouth or rectum or both, encourages the taking of water, and stops all food for from twenty-four to forty-eight hours. He also says that when he sees another case doing badly that he will advise hypodermoclysis of physiological salt solution or a soda solution, probably a bicarbonate solution. His prophylactic treatment consists in a diet low in fat, milk of magnesia as a laxative, when such is needed, and the administering of calomel at regular intervals of two or three weeks, followed for one, two, or three days by nightly doses of sodium phosphate gr. XX, and sodium salicylate gr. III, in a child of seven years. The first sign of malaise or poor appetite is the signal for a urinary test for the acid.—*Archives of Pediatrics*, April, 1909, P. 292.

**The Hard Curds of Infant Stools. Their Origin, Nature, and Transformation.**

—The discovery that the firm rounded curds, occurring not infrequently in the stools of infants fed upon cow's milk, are composed in part of fatty acids and soaps has led to considerable discussion and seems to warrant a further inquiry into the origin of such bodies and their subsequent transformation during their passage through the digestive tract. The claim has frequently been made of late that these masses are simply aggregations of soaps and fatty acids containing no proteid and therefore by implication are not entitled to be called curds. Although doubtless founded upon some individual tests, this view of the hard curds seems to be largely based upon the categorical statements of Czerny and Keller in discussing "casein stools" that "these flakes and masses which have been taken for casein in the feces are not casein, but fatty soaps."

SOUTHWORTH and SCHLOSS found the firm curds

to consist mainly of fatty acids and protein in varying amounts, although they showed uniformly the presence of neutral fat by the staining reaction. Insoluble soaps were often present, but apparently in lesser amounts than is usually assumed, never appearing in the purely qualitative tests to approach in amount the fatty acids, or the protein. In some of the curds the final residue considered to be protein at least one-half of the original mass tested. In every instance, without exception, the final residue of the masses responded to all four of the tests for protein.

There are, however, certain other masses occurring in the stools which are made up of calcium soaps alone, but these masses can hardly be mistaken for true curds. They are quite small and usually occur in greenish stools, from which they are distinguished by their gray color and soft consistency.

No confusion need, however, arise if we draw upon our available knowledge concerning the curdling of milk in the stomach and recall that by all analogies, as well as by chemical tests of such curds, whether when rejected from the stomach by vomiting or passed on through the intestines, such firm massive curds must primarily be "milk curds," whose origin depends upon the formation of acid paracasein and that the inclusion of fat is but an inevitable mechanical accident.—*Archives of Pediatrics*, April, 1909.

**A Report of Four Cases of Typhoid Fever in Infants.**

—The course and symptomatology of the disease in these patients confirms MORSE in his opinion that typhoid fever is as easily recognizable in infancy as in later life and that it really is uncommon at this age and not apparently so because it is overlooked on account of an unusual symptomatology. The hypoleucocytosis characteristic of typhoid was present in these cases, as were the rose spots in all who were seen at the height of the disease, while the spleen was palpable in three instances. The Widal test was positive in all at admission and at the beginning of convalescence. The relative slow pulse was not found, therefore this sign does not count for as much as in later life. The duration of the fever was comparatively short; the signs in the lungs unusually marked.—*Pediatrics*, November, 1908, P. 663.

OPHTHALMOLOGY.

Conducted by  
W. R. PARKER, M. D.

A Mucous Patch on the Conjunctiva With Demonstration of the Spirochaete Pallida.—

The author reports the case of a woman, aged 25, who was the subject of syphilis. She had a bad cough, was poorly nourished, and had been confined but a few days before he saw her. She had a scar on the vulva, a rash had been present, but had almost disappeared. Glandular involvement was marked, and her mouth was a mass of mucous patches.

Some swelling of her right lower eye lid had been noticed the day before she was seen by the author. She did not complain of pain or unpleasantness about the eye; the lid was somewhat swollen along the edge of the outer quarter. The eye was watery and conjunctiva markedly congested. Examination of the lower lid revealed a mucous patch somewhat oblong in shape extending laterally from the middle fourth of the lid almost to the outer canthus, and from the edge of the lid to the fornix.

Slides were prepared and stained by "Giemsa and modified methods." In all the spirochaete pallida was found in quantities.

"The relations of the spirochaete pallida to eye conditions is as follows:

"(1) The finding of spirochaete pallida in apparently healthy eyes of infants who have died of congenital syphilis.

"(2) Its discovery in lesions set up experimentally in the eyes of monkeys and rabbits by the inoculation of syphilitic material.

"(3) Its discovery in actual syphilitic lesions of the human eye."

Stephenson found the spirochaete pallida in the aqueous humor of a woman with irido-cyclitis during secondary syphilis also in the scrapings in three cases of keratomalacia in syphilitic infants. He believes in the discovery of the spirochaete we have the strongest possible proof of the syphilitic nature of any disease of the eye. Babs found the spirochaete pallida in the eyes of three syphilitic still-born fetuses, and finally we have the finding of the spirochaete pallida in the case here reported. A mucous patch of the conjunctiva from a study of the literature seems to be a rare condition. Whether these cases are seen and not reported is a question. The finding of the spirochaete pallida in the conjunctiva is interesting. While it has been found in a number of eye conditions, I would not be surprised if this were one of the first reports of its demonstration from a secondary lesion of the conjunctiva."—*Oph. Record*, Feb'y, '09.

**Atropin—Its Use and Limitations in the Correction of Heterophoria.**—The author stumbled upon the treatment of heterophoria by the use of atropin in 1898, through a case which misunderstood his directions, using atropin three weeks instead of three days. Since then he has refracted 2,000 cases under atropin; of these

300 showed more or less heterophoria, and of these 500 cases, 90 are reported in his paper, grouped as follows:

1. Those where the heterophoria has been cured.....42
2. Those where the heterophoria has been improved.....26
3. Those not responding to the treatment.... 8
4. Incomplete records ..... 9
5. Atropin not continued long enough..... 5

Of the cases reported as cured, fourteen had esophoria, ranging from 2 to 9 degree. Of these, three had 2 degrees and four had 3 degrees. Two cases had hyperphoria of 2 or 3 degrees; fourteen had exophoria varying from 2 to 22 degrees. Eight had exo-hyperphoria, the exophoria varying from 2 to 11 degrees, and the hyperphoria from 1 to 10 degrees. In three cases the original error was not given.

About the same varieties of cases were classified under the head of cases not permanently cured. Of the cases classified as not improved, all but one had exophoria varying from 3 to 9 degrees.—GILBERT D. MURRAY, *Annals of Ophthalmology*, April, 1909.

**Case of Suppurative Joint Affection Following Ophthalmia Neonatorum.**—The author, after speaking of the rarity of the occurrence of supuration of the joints as a result of general infection by gonococci in connection with ophthalmia neonatorum, reports a case in a patient aged three weeks. Both eyes were affected and the gonococci demonstrated in smear preparations. The smear also showed several long, thin bacilli, larger than the Koch-Weeks bacilli.

Under treatment the discharge from both eyes greatly diminished in five days, but on the seventh day a recrudescence took place in the right eye. On the eleventh day the left eye was greatly improved, but the right was much swollen and continued so for a week longer.

On the 22nd day (32nd of the disease) both eyes being nearly well, the left forefinger and the right great toe were much swollen, livid in color and fluctuation was manifest in both. The mother had noticed the redness only one day before. The joints were not very painful, but temperature 100° F. The swelling was most intense around the carpo and tarso-phalangeal joints. Suppuration being manifest the joints were opened. Subsequently a swelling appeared in the right palm, and two weeks after the onset general infection made its appearance. The right knee became swollen, but did not suppurate. All the operation wounds healed and the child eventually recovered. Preparations of the pus from the joints showed the presence of gonococci.—LESLIE BUCHANAN, *Ophthalmoscope*, Feb., 1909.



## GENITO-URINARY SURGERY.

Conducted by

W. A. SPITZLEY, M. D.

**Double Vasectomy in Criminals and Those Mentally Deficient.**—G. HENRI BOGART says that the first rational and successful attempt to better the human race by intelligent emasculation of the unfit, that they might not perpetuate their menace to future generations, while the unfortunates are left with all the rest of their natural powers of enjoyment and benefit, was the passage of a procreation law by the General Assembly of Indiana on March 7th, 1907.

The law is as follows: "Preamble: Whereas, Heredity plays a most important part in the transmission of crime, idiocy, and imbecility; Therefore, Be it enacted, that on and after the passage of this act it shall be compulsory for each and every institution in the state entrusted with the care of confirmed criminals, idiots, rapists and imbeciles, to appoint upon its staff, in addition to the regular institutional physician, two skilled surgeons of recognized ability, whose duty it shall be to examine the mental and physical condition of such inmates as are recommended by the institutional physician and board of managers. If, in the judgment of this committee of experts and the board of managers, procreation is inadvisable and there is no probability of the mental improvement of such inmates, it shall be lawful for the surgeons to perform such operation for the prevention of procreation as shall be deemed safest and most effective."

The credit for the passage of this law belongs to W. H. Whittaker, superintendent of the Reformatory, the prison for young convicts in Indiana, in conjunction with Dr. H. C. Sharp, the institutional surgeon.

The method employed to bring this law into practical effect is vasectomy, a simple surgical procedure which breaks the continuity of the vas deferens, accomplishes the desired result of inhibiting the criminal's procreative power and which burdens him with no unnecessarily unpleasant nor harmful sequelae.

When the law went into force there were, on an average, 1,200 prisoners in the Reformatory at Jeffersonville, Ind. Of this number 293 were subjected to vasectomy. During the first year there were 426 admissions to the prison and of this group 119 were operated upon, or approximately 25 per cent of all.

Of these 412 operations there was none that required more than three minutes for the actual surgical work. Not a single case of any untoward results occurred. Not a man lost a minute from the usual work in which he was engaged.

Superintendent Will H. Whittaker, of the institution, began the application of this operation in 1896, when there was no law for its enforce-

ment. Of course he had to secure the personal consent of the convict. These cases were carefully recorded and the men have been kept in touch with since their liberation.

None of these has suffered loss of sexual desire or ability, nor has the general health of any of them been impaired.

It will be observed that the law, as quoted, makes no distinction as to the sexes. A woman criminal, however, is almost as easily operated upon as is her brother. Section, or stenosis of the Fallopian tubes, and the thing is done. While the ovaries continue in their function, libido is present, and no more harm would be done than in the case of the male.

In Indiana, there was trouble to get the matter through the legislature and in practice, the law not yet being applied to the female, and not in all the male institutions, though it is hoped in time to make it apply to all institutions—local and otherwise—in the State, and to make it mandatory.

No young doctor, nor one who keeps in touch with the progress of the day, nor a progressive minister, fails to be heartily in favor of the system.

Reforms along such seemingly radical lines must come from the medical profession, and the sooner we have ourselves educated up to the knowledge of the importance and simplicity of the one in hand, the sooner shall we commence the curtailment of the monster evil.—*American Journal of Dermatology*, May, 1909.

### The Effect of Vaginal Cystocele Upon the Treatment and Cure of Gonorrheal Cystitis.

Realizing the ravages of chronic gonorrheal infection in womankind the author seeks to eliminate all conditions which tend to prolong the acute attacks, thus rendering them chronic and keeping up the dangers of re-infection. He finds vaginal cystocele an obstacle which often prevents the elimination of bladder infection because of the congestion induced by the real position of the organ. These cases not only do not respond well to the ordinary form of irrigation treatment, which usually causes the infection to disappear from an otherwise normal bladder, but they suffer abnormally much and unnecessarily long from tenesmus, the periodic spasms lasting occasionally for many months.

Anterior colporrhaphy performed to control the cystocele is almost immediately followed by clearing up of the bladder inflammation which has hitherto resisted the usual curative measures.—EVERETT E. PADGETT, *American Journ. of Derm. & Gen. Urin. Dis.*, May, '09.

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## Original Articles

### NON-SPECIFIC INFECTIONS OF THE INTESTINES\*

GEORGE H. THOMAS, M. D.,  
Holland.

The purpose of this paper is to review briefly a number of apparently infectious diseases of the intestines of which as yet no specific microbe has been isolated, and about whose etiology there is a decided difference of opinion. These infections, or diseases, or, if you please, groups of symptoms, are not given the attention in medical research, or in medical schools, or even in our societies, to which their relative importance as a cause of death entitles them. They have no geographical limitations but are found in all parts of the United States, and do not differ materially in their relative importance, except as their virulence is favorably modified by climatic conditions on the Pacific coast.

It is said, "Statistics always prove that which the person using them desires to prove." I am reminded of the old lady, who showing signs of timidity at undertaking a sea voyage, was relieved of her fears by Mark Twain, who gravely informed her that more people died at home in bed than were drowned, proving to her that it was much safer to take the voyage than to remain at home. His statement was statistically correct. In the selection

of localities from which to show the geographical importance of these infections I have tried to be unbiased, and have selected San Francisco city and county, New Orleans, New York, and our own state and county.

For the purpose of bringing the subject before you in a concise form for discussion, I will eliminate as specific infections, typhoid and typhus fever, tuberculosis, dysentery, cholera asiatica and nostras, and I shall also exclude hernia with strangulation, intussusception, volvulus, fistula in ano, appendicitis, paralysis, and peritonitis as mechanical or secondary in effect and will consider in the statistics of this paper only diarrhea, duodenitis, jejunitis, ileo-colitis, colitis, proctitis, entero-colitis, gastro-enteritis and cholera infantum.

Among this large number of diseases there are distinctions without much difference, with the exception of cholera infantum and gastro-enteritis. In both of these conditions, the clinical findings are quite clear, but in all future reference to this group of diseases, I shall use the term diarrhea and enteritis as being more concise and quite as comprehensive. In the city and county of San Francisco for the fiscal year ending June 30, 1907, which

Read before the Ottawa County Medical Society, Jan. 12, 1909.

was the year following the great earthquake, there were the following deaths and causes:

1. Organic heart disease .....	848
2. Tuberculosis of lungs .....	578
3. Lobar Pneumonia .....	492
4. Bright's disease .....	267
5. Broncho pneumonia .....	256
6. Apoplexy .....	239
7. Typhoid fever .....	229
8. Diarrhea and enteritis .....	225

From July 1, 1907, to November 1, 1908:

1. Organic heart disease .....	1009
2. Tuberculosis of lungs .....	907
3. Lobar Pneumonia .....	508
4. Bright's disease .....	441
5. Apoplexy .....	351
6. Diarrhea and enteritis .....	285
7. Broncho pneumonia .....	23
8. Typhoid fever .....	135

In every instance of suspected typhoid both the Widal and Diazo reactions were used, and whenever possible a leucocyte count, before a positive diagnosis was made. Of the 225 deaths in 1907, 182 were under 5 years, and 42 over.

From this small number of deaths reported, one would be justified in stating that the infection or intoxication was not the result of impure water or food, or was very favorably modified by climatic conditions. In the city of New Orleans the leading causes of death were:

	1906	1907
1. Tuberculosis of lungs .....	871	968
2. Organic heart disease .....	734	759
3. Diarrhea and enteritis .....	547	590
4. Bright's disease .....	468	453

From 1880 to 1907, a period of 28 years, the following were the leading causes of death:

1. Tuberculosis of lungs .....	23,394
2. Organic heart disease .....	14,634
3. Diarrhea and enteritis .....	14,595

Diarrhea and enteritis were only 39 less than organic heart disease.

In the city of New York in the year 1907, there were the following deaths:

1. Tuberculosis of lungs .....	9099
2. Organic heart disease .....	7237
3. Bright's disease .....	6684
4. Diarrhea and enteritis (under 5 years) ..	6610
5. Lobar pneumonia .....	6217
6. Broncho pneumonia .....	5790

Comparing the deaths from typhoid fever with diarrhea and enteritis for the same quarter of the year 1907, we find no similarity of cause.

	Diarrhea and Enteritis (Under 5 years)	Typhoid Fever
1st quarter .....	551	124
2nd quarter .....	705	155
3rd quarter .....	4456	198
4th quarter .....	898	263

During July, August and September there were 4456 deaths, which tends to show climatic influences as the predisposing cause.

In July, August and September of 1908 there were 3829 deaths under 5 years from diarrhea and enteritis, or more than from tuberculosis of lungs, organic heart disease and pneumonia combined.

The vital statistics of Michigan for 1907 are not compiled, but in 1906 the leading causes of death were:

1. Organic heart disease .....	3526
2. Diarrhea and enteritis .....	3125
3. Tuberculosis of lungs .....	2303
4. Lobar pneumonia .....	2081

To show the climatic influences affecting diarrhea and enteritis and to compare it with typhoid fever, I will give you the death rate per 100,000:

- 1. Counties of Upper Peninsula—  
Diarrhea and enteritis, under 2 years, 156.4;  
over 2 years, 19.8.  
Typhoid fever, 25.1.
- 2. Northern Counties, Lower Peninsula—  
Diarrhea and enteritis, under 2 years, 113.8;  
over 2 years, 35.0.  
Typhoid fever, 32.6.



3. Central Counties, Lower Peninsula—  
Diarrhea and enteritis, under 2 years, 91.6;  
over 2 years, 21.9.  
Typhoid fever, 34.6.
4. Southern Counties—  
Diarrhea and enteritis, under 2 years, 80.2;  
over 2 years, 26.3.  
Typhoid fever, 25.7.

In Ottawa county the leading causes of death were:

- |                                 |    |
|---------------------------------|----|
| 1. Diarrhea and enteritis ..... | 54 |
| 2. Organic heart disease .....  | 42 |
| 3. Tuberculosis of lungs .....  | 33 |
| 4. Apoplexy .....               | 31 |
| 5. Lobar pneumonia .....        | 26 |

In the same year there were 5 deaths from scarlet fever. Do you remember how the physicians of this city were called by the chief of police to meet in this room in solemn conclave with the Board of Public Health, in regard to an epidemic of scarlet fever consisting of 9 cases in a city of 10,000 and I believe 2 deaths? The people were terror stricken. The schools were closed and nervous women were on the verge of prostration as a result of the agitation. Our force of teachers was demoralized.

During 1906 there were 5 deaths from scarlet fever, while 54 people, mostly children, died as a result of diarrhea and enteritis, and nothing was thought or heard of it because it is unfortunately not our popular disease. The combined deaths from contagious diseases and tuberculosis were 53 or 1 less than from diarrhea and enteritis.

In Allegan county diarrhea and enteritis was fourth as a cause of death, and the number of deaths from this source was more than double that from contagious diseases. In all the statistics given, diarrhea and enteritis was the direct cause of death, and no consideration has been given the great number of contagious and infectious diseases in which this complication was an important contributing cause,

I trust you will pardon me for the time consumed in dry statistics, but in no other way can I emphasize the tremendous importance of non-specific diseases of the intestines as a cause of death. As I have stated, there is, and can be, a decided difference of opinion in regard to the etiology of this group, but the obscurity which has surrounded them for so long has been partially cleared away through the researches of such men as Bouchard, Finkelstein, Combe, Charrin, Vaughan, and Novy.

However different the terms used to denote the findings or theories of these men, one cannot but be impressed with the fact that again there is a distinction without much difference, as in the minute subdivision of enteritis into its theoretical parts.

In using the word infection in the title of this paper, I am fully aware that a large number are ready to disagree with me, and to insist upon the use of the many terms used by our best writers as more accurate and less misleading.

I am using this term only in its broadest sense, namely, to convey the idea that all of this group of diseases are caused either directly or indirectly by bacteria.

Analyzing the different terms used to designate the etiology of these diseases, we find that statement to be substantially correct. Toxin, a bacterial poison, whose chemical nature is uncertain; toxalbumin, an albuminous substance formed by bacteria; autointoxication, the absorption of bacterial poisons or products of disordered metabolism of the patient's own cells; autoinfection, disease caused by bacteria derived from the individual's own body; ptomaine, an organic chemical compound, basic in character, formed by the action of bacteria on nitrogenous matter; leucomaine, a basic substance which results from tissue metabolism in the body. All of these conditions except two are dependent on bacteria for their origin. Autointoxication may be the result of

absorption of disordered metabolism or bacterial poisons, and leucomaines result from tissue metabolism but have we any proof that the disordered metabolism is not also the result of bacterial irritation, especially in the intestine?

The digestive tract is admirably fitted to combat infection, but at the same time is a constant source of infection. The antitoxic system of the intestine consists of internal factors which limit putrefaction, such as absorption; the greater the concentration and the less liquid, the greater the absorption and the less residue for putrefaction. The acidity of the gastric juice destroys some bacteria and inhibits their growth. The biliary acids, especially tauro-cholic acid as shown by Linderbergen, have an important antitoxic action. The pancreatic juice according to Charrin neutralizes a large number of toxins.

The acid reaction of the small intestine due to microbic fermentation of sugar, cellulose, fats, and carbo-hydrates, protects the albumen derivatives from the proteolytic anaerobic bacteria.

This acid reaction is maintained in spite of the alkalinity of the intestinal juice (MacFayden) by the aerobic and anaerobic facultative bacteria, *bacillus coli* and *lactus aerogenes*. Thus the proteolytic anaerobic bacteria, which exist only in an alkaline medium, are kept in subjection.

In the normal colon, we find aerobic bacteria or facultative anaerobics, but in enteritis, the anaerobics, *proteus putrificans* and *mesentericus* are present, and the aerobics *coli* and *lactus aerogenes* disappear. (Bienstock.) The intestinal mucosa prevents the invasion of poisons by its secretion and the action of its cells.

Charrin has shown that the diastases act on the protoplasm, alter the microbes, and adulterate the microbic secretions, also owing to a lack of oxygen, the bacterial excretions like phenol and ammonia restrain their multiplications.

The mucus acts both mechanically and chemically. The leucocytes act on the soluble elements, and in infancy leucocytosis is more marked at the moment of digestion, which is a favorable time for the passage of soluble toxic substances into the capillaries. Delamarre has noted an insufficiency of mucin, diastasic compounds, and muscular fibers in the ileum during infancy, which shows why there is a predisposition to disease during that period. The cells of the mucosa exercise an antitoxic and protective function. In 1887 Charrin showed that toxins lost their toxicity in whole or in part, when introduced into the body through the digestive tract. Fifty times the dose of filtered bacterial cultures that is fatal when injected into the circulation, if administered by mouth shows no appreciable disorder.

If, however, there be a lowered vitality of these cells as a result of physical or chemical irritation, the dose will be rapidly fatal.

Should any toxic substance pass through the mucosa and enter the portal vein, the liver cells withdraw it; and it is estimated the liver destroys two-thirds of the poisons of digestive origin, and acts as a protection against gastrointestinal autointoxication. (Bisso.)

Thus, briefly, I have outlined the natural protective and antitoxic character of the intestinal tract and have tried to show how this wall of defense is constantly menaced by bacteria whose normal habitat is the intestine, and by invasion from without of pathogenic and non-pathogenic bacteria.

Among the primary causes which tend to disturb this system of defense are the following:

1. Increase in toxic substances in the intestine through fermentative changes as a result of errors in diet. All forms of these are primary causes. Artificial feeding of infants in hot weather, over or under feeding, milk from a nurse, whose psychic state is abnormal, that is irritable

or nervous, or whose physical condition is bad as a result of drink, poverty, menstruation, or pregnancy. Milk coming from cows fed on green fodder, oil cakes, or by-products of distilleries and vinegar plants, contains toxic acids. In the adult any diet which increases nitrogenous putrefaction, either before or after entering the intestine and furnishes the intestinal bouillon culture in which the proteolytic intestinal microbes live.

2. Sudden changes in temperature, "a sudden fall in the temperature in fall or spring causes a severe catarrhal diarrhea; how we do not know." (Osler.)

3. Changes in the intestinal secretion in which its alkalinity is increased. (MacFayden.)

4. Nervous influences.

Among secondary causes may be mentioned the infectious diseases, especially tuberculosis and pneumonia, hepatic insufficiency, inflammatory extension from surrounding organs, anemia, glandular diseases and Bright's disease.

The symptoms are too well known to need mention. The treatment is of necessity dietetic, disinfectant, and antiseptic, and I do not intend to go into this in detail, but cannot refrain from speaking of the tendency of our test tube specialists to belittle or discard all intestinal antiseptics as wholly inactive in the medicinal doses given. They point to the time required and the antiseptic necessary to effect antisepsis in a test tube culture. The comparison is so absurd that I wonder at the eagerness with which such statements are accepted without investigation by so many practitioners. As I have stated, the

gastrointestinal tract is of itself antiseptic and antitoxic, and although it is the normal habitat of countless micro-organisms, both pathogenic and non-pathogenic, yet we have no infection. It is only when this natural wall of defense is broken down by alterations in the intestinal juices or putrefactive changes in the intestinal contents, or when we have a lowered resistance of the cells of the mucosa, as a result of nervous depression, or irritants, either physical or chemical, that infection is possible.

To cure such infection it is only necessary that we first eliminate the offending material and regulate the diet so as not to furnish a suitable media for further bacterial growth.

It is only when this has been accomplished that antiseptics and disinfectants are indicated, and the highest of European investigators support me in the statement that intestinal antiseptics lessen putrefactive changes, diminish the vitality of the bacteria, and cause indol to disappear from the urine and stools.

First in the list of antiseptics I name: (a) calomel, then (b) ichthoform, (c) salacetol and (d) bismuth salicylate, although many others may be used to advantage.

In conclusion, I hope this subject of non-specific infections of the intestines will receive the consideration from the medical profession of this country which its importance as a cause of death entitles it to receive.

- a. Morax, Hoppe, Seyler, Lavarsky.
- b. Anfrecht, Rabow, Schefer, Polacco.
- c. Combe, Bauman.
- d. Vulpian, Riegner.



## CAUSES OF OBSCURE FEVERS IN CHILDREN\*

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We have been taught in the past that fever in children does not mean anything; their nervous system is so unstable that they are apt to have high temperatures from slight causes. This teaching is a step forward upon the teaching of our fathers who used to think of a fever as a disease *per se* and not a symptom of a disturbance that has a definite cause back of it. If physicians in general practise would spend more time and be more thorough in the examination of their little patients, they would, as some specialists, almost always be rewarded by the finding of the true cause of the fever in the child. The supposition that an infant or child is teething or has eaten something that does not agree with it, being the cause of his sickness is not taken so readily by the skilful physician. He is not satisfied with the suggestion of the family that this or that is the matter with the child. A little calomel or aconite does not come in in the treatment of fever, but he uses every means in the examination of the child as he does in an adult; and still it is surprising how often in consultation a man meets with such cases where no attempt has been made by the attending physician to examine the urine, blood or sputum of the child, and yet such examinations alone, very often, reveal the diagnosis. When such a suggestion is made to the attending physician, he often wonders and asks how to obtain such samples for examination. Now it is very easy to obtain a specimen of urine. In boys any wide-mouthed bottle or a little jar or rubber bag put around the genitals, kept in place by a diaper, especially quite

a while after urination and before the next micturation is expected, is sufficient. In girls, a pad of sterile cotton or sponge over the vulva will collect enough for examination. Chapin, of New York, has invented a very suitable infant urinal for such purposes. In very rare cases, if necessary, we may resort to the catheter.

The sputum is hard to obtain in young children. A smear from the throat after coughing is sufficient. Findlay, of Glasgow, advises to take a piece of gauze around one's finger, irritate the pharynx or epiglottis, inducing coughing, and the expectoration that is coughed up is swept out by the mouth before the child can swallow it, which is usually enough for bacteriological examinations. Of course blood is obtained in the same way as it is in adults.

How many cases are diagnosed as malaria or typhoid and no attempt made at a blood analysis? And often when such analysis is made those things can be excluded. Urinary examinations are seldom made in children and if made at all, are confined to chemical examinations only, while microscopical examinations will reveal a great deal.

It is true that often we will meet with a little patient in whom repeated examinations will fail to account for a continuous rise of temperature and after close and careful study of the case, one will fail to find the cause. In such a case, one can at least be satisfied that there cannot be any very serious condition existing.

S. L., age 4½ years, seen by me with the following history:—Perfectly well up to six months previous, when mother was first introduced by her  
\*Read before the First Councilor District Society.  
April 22, 1909.

family physician to a clinical thermometer, and advised to take the child's temperature occasionally. One day she summoned the physician. The child was vomiting, appeared very restless and had a temperature of 100.5 degrees F. After treating the child for what he thought was probably some dietary indiscretion the child appeared better but the fever continued. Diagnoses of malaria, rheumatism and tuberculosis were made from time to time and discarded. I was called in when the child had a temperature continuously for six months, maximum 101° F.; minimum 99.5° F., by rectum. Examination of the chest, abdomen, nose, throat and ears negative; blood, sputum and repeated urinary examinations negative. Calmette reaction negative. Going carefully into the previous history mother could recollect that the child was frightened on the first day she became sick. The child appeared anxious about herself. She was watching the doctor and myself and seemed to understand that she was the center of the stage and a mystery to us. Gaining the child's and the mother's confidence, I advised the mother not to take the little one's temperature any more. I saw her at my office several times but would not examine her closely; only talked to her and practically played with her.

To my surprise, in two weeks after discarding all treatment, and also the thermometer, and diverting the child's mind from herself by cutting out pictures and systematic playing, the child's temperature was normal and stayed normal the last year with the exception of a few days during an attack of influenza.

Undoubtedly our experience teaches us that the nervous system plays a great part in keeping up a rise of temperature in children the same as in adults. All they need is a starting point and then the anxiety on the part of the family and the physician will cause such conditions to persist. Emotional disturbances, hysteria, will be the cause of fever in older children. I have often known disappointments in school, play, dress, presents and parties, etc., to be responsible for attacks of fever. But we must be very careful and very positive that we have no organic or other functional causes before we attribute it to such conditions as enumerated. Overwork in school or over-exer-

tion such as continuous, strenuous playing is responsible for fever in children. Lack of fresh air and over-feeding very often result in continuous fever in children with definite findings.

Agnes E., aged 3 years, would get periodical spells of rise in temperature from 101 to 102 degrees F. lasting several days, during which the child would appear well, seemingly unaffected by the fever. Examinations would reveal nothing and all attempts at diagnosis proved fruitless. I gave it up in despair, until one day the nurse-girl took sick and left the family. The child got well. The same nurse-girl applied to me soon after, asking if I could not recommend her. I said, "I would because you were so good to Agnes. Agnes does not look so good and plump as she did when you had her." "No wonder," said the girl. "Her mother is starving her, living up to certain rules. I don't believe in feeding a baby by rules. You know baby had a pint of 20% cream every day when I took care of her." Of course the child did not get that cream since and undoubtedly her condition was due to fat over-feeding.

Diseases of the gastro-enteric tract in young children, chronic intestinal toxemias or any metabolic disturbances in older children, chronic duodenal indigestion with jaundice, clay-stools, attacks of vomiting, pain, are causes of prolonged fevers in children. Following such attacks we very often have infection of the kidneys, but the colon or the different forms of intestinal bacilli and the true condition is only found by the examination of the urine. When a pyelitis follows intestinal infection or any of the infectious diseases, we have an irregular temperature, perhaps very high or very low in the same 24 hours; it may be high in the morning and low in the evening, and may have intermissions of normal temperature. When following digestive disturbances, the feces are full of shreds of membrane, and there is anorexia. In primary pyelitis we have fever intermittent in character, emaciation, constipation, pain on urination and bed-wetting (which may be the first symptom), passing very little urine at one time. But we may have

a pyelitis in a child primary without any symptoms. And even the urine, at times, may be free from pus. Sample of the morning urine may be normal, but later in the day pus may be present. An examination of the blood will show a leucocytosis.

Baby L., aged 11 months, taken sick; chill; temperature 103° F.; cough. Examination of the lungs first negative; examination 3 days later, dullness in right apex and later at the base of the same lung. After crisis he got well; temperature normal for 3 days. Saw him again on the fourth day at 8 a. m.; temperature 102° F.; at 12 noon same day, temperature 99° F.; at 5 o'clock p. m., temperature 104° F. and at 10 o'clock p. m., temperature 100° F. This condition persisted the next day. Examination of chest negative; examination of ears (by Dr. Eugene Smith, of Detroit) negative; examination of blood by Detroit Clinical Laboratory, increased leucocyte-count. Examination of urine, albumen, pus cells, a few hyaline and granular casts. Diagnosis of pyelitis made. Child died a week later.

In primary or secondary pyelitis, in examining the urine we always have acid urine, albumin, pus, and a few casts. We must also think of chronic albuminurias in children and the persistent nephritis that follows scarlet fever. We differentiate a nephritis, acute or sub-acute, from a pyelitis, by fewer casts in the latter and wider irregularity in temperature, which may be a range of 3 or 4 degrees in 24 hours. In secondary pyelitis the colon bacillus is almost always found. We may have an afebrile condition where the differential diagnosis will have to depend entirely on the examination of the urine and blood. Pyelitis occurs more often in female infants, and truly when one watches a nurse or mother changing a baby's soiled napkin, he is surprised at not having any more infection of the urinary tract.

Diseases of the tonsils and adenoids are often the cause of continued fevers in children, but, of course, the diagnosis is obvious and the treatment is at hand. And after the removal of the same, the

temperature should stay down. But often when such chronic inflammations have extended to the mucous membrane of the mouth, pharynx and larynx, and have infected the cervical glands, such infections will harbor germs causing an indefinite run of fever. Streptococcic infections of the tonsils or any portion of throat is very often the source of a continual fever. It is true that the temperature is usually very high, but it also may be continuous and low. Caries of the teeth, uncleanness of the mouth, and the different forms of stomatitis will often be responsible for an irregular temperature. Infections of the nose, with their nasal secretions and very often with true Klebs-Loeffler Bacillus (nasal diphtheria—diphtheria carrier), also infections of the antrum, are causes of irregular rises of temperature in children, as well as in adults. Tubercular lymphnodes, chronic diffuse tuberculosis, miliary tuberculosis in children are often not easy to diagnose, and these have a fever as their first symptom. Calmette eye-reaction, Von Pirquet's vaccine reaction, sputum examination, and repeated physical examinations should be made. There has been a great deal written lately against the eye-test and reports of serious results. But it will be interesting to refer you to Dr. Holt's article on tubercular tests in young children in *Archives of Pediatrics*, January, 1909, page 1. He reports no unpleasant results from the eye-test and he does not claim, as other observers do, the reliability of the skin-test over the eye-test. He says: "There is not much to choose between the two (Pirquet and the eye-tests), very seldom do good authors make use of the subcutaneous injection of tuberculin in children." A history of exposure, or living with tubercular people, is very valuable, as the little ones are so often kissed and played with until they become infected.

On the prephysical signs of tuberculosis in children, W. C. Hollopeter in an article in the *Journal of the American Medical*



*Association*, November 21, 1908, makes the following remarks: "The mediastinum is more frequently involved than it is supposed. It is likely to follow any of the eruptive diseases where the superficial lymph nodes are involved. We then get dullness over the first bone of the sternum, signs of pressure on the veins, paroxysmal cough, and they all point to caseation of the bronchial glands. Signs of pressure do not occur until the glandular swelling is considerable. A diagnosis before pressure symptoms develop is not easy. Hollopeter in his article suggests the following, which I have often found in early cases. If the child is made to bend the head back so that the face becomes horizontal and the eyes look up to the ceiling above, a venous hum is heard over the upper bone of the sternum varying in intensity according to the size and position of the diseased glands. This hum diminishes as the head is brought forward and ceases altogether when the head is in the normal position.

Nagel in *Jahrbuch Kinderheilkunde*, 108, No. 4, says that enlarged bronchial and mediastinal glands are recognized by flattened percussion sound over the fifth and sixth spinous processes of the spinal column.

Inflammations of the middle ear are very often the cause of a long irregular temperature and have fooled a good many clinicians; and sometimes, not until the ear has commenced to discharge has the true condition been recognized. When a child has a cough, an ordinary coryza, followed by an irregular slight redness of the throat, rise of temperature, becomes cross and fretful, cries easily, examine the ears. A speculum examination will reveal a redness of the drum and a slight bulging of the middle ear. An early incision in such cases will often cut short the illness and prevent more serious involvement. We meet with those conditions in the early spring and fall of the year, usually following an influenza or any of the infectious diseases in child-

hood, but very often only an ordinary coryza. And in a routine examination of the ears you will not miss it. It is true that nature often makes the diagnosis and applies the treatment; but it is for us to give freer drainage and aid nature.

Another common cause for continuous fevers in children is the rheumatic affection with the endocardial and pericardial complications and chorea. The slight recurrent attacks without any heart involvement are the cases that carry a continual irregular temperature and will go on unrecognized until followed by complications. The man who does not see very many children with rheumatism expects to see in a child always the same picture that he sees in an adult and he is disappointed and often passes the pains as growing pains or due to excessive playing or exercise.

Different forms of eczemas, congenital syphilis, seborrhea of the scalp, associated with their glandular swellings, are responsible for fevers in children.

In diseases of the new-born, which are numerous, and almost always due to infections at birth, very little attention is paid to the rise of temperature, and the infection is not recognized until some pathological symptoms, like jaundice, pemphigus or other eruptions develop.

In conclusion I would say that if the physician would bear all this in mind when he sees his little patient, who cannot complain to him, but would make a thorough examination of the patient, and not be satisfied because something suggests itself at first sight to be responsible for the condition, he would attain many better results. He should examine and treat the patient; not only the disease.

Everyone meets often in consultation with cases where the patient is drugged, treated for everything, given cod liver oil, iron and other things that the physician thinks he needs, but the system would not stand for when a little fresh air, easily digested and assimilated food will get the system toned up and the patient well.

## THE MODERN TREATMENT OF DIFFUSE SUPPURATIVE PERITONITIS\*

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Of all the family of Medical Bugaboos, none has been so generally feared by the practicing physician as the old gray-headed father of nightmares—Diffuse Suppurative Peritonitis. Is there any one of us who cannot raise a ghost from the past—a phantom with anxious, drawn, lead-colored face, constantly vomiting; with knees drawn up over its swollen and motionless abdomen? We can raise this ghost, but can we lay it? I think we can.

In presenting the treatment of a condition in which there has been such a frightful mortality in the past, I shall not put forth any methods or theories of my own, but shall present for comparison the treatment used at the present time by the surgeons who are the most successful in its relief. In gathering materials for this paper, letters were sent to a number of the leading surgeons of this country asking them the following questions:

1. Do you *always* operate in diffuse suppurative peritonitis? What conditions (if any) do you consider contra-indications to operation?

2. On how many cases have you operated and with what mortality?

3. What is your method of operation and treatment?

4. Do you employ the Fowler position?

5. Do you or do you not flush out the abdominal cavity after operation?

6. Do you employ the Murphy method of rectal instillation?

7. Do you have favorable results from

the use of antistreptococcic serum?

8. Do you endorse Morris' "treatment by scientific neglect" as outlined at the June meeting of the American Medical Association?

These questions were answered by twenty surgeons. In looking over their replies, one is impressed with the remarkable difference of opinion still existing among surgeons as to the best treatment in this condition.

Byron Robinson of Chicago takes a rather pessimistic view of operative interference. He writes: "After twenty years labor in the peritoneum, I am unable to answer categorically your questions on Diffuse Suppurative Peritonitis. First—I am inclined to think in last resort cases that more would live without operation. I think that, if we operate, the peritoneum should be flushed out with salt solution and then to (a) close the peritoneum and administer opiates or (b) drain extensively and employ continuous proctoclysis, eight ounces per hour. Proctoclysis is a distinct addition in the cure of peritonitis. Postural therapeutics possess limited utility. In general, I think more would recover without operation with use of opium."

Daniel N. Eisendrath, of Chicago, has a number of contra-indications to operation. He answers my questions as follows:

"No. 1. No; I do not operate after the third day in adults, nor after the second day in children if symptoms of sepsis are very marked, such as a very rapid pulse above 150, of poor quality, greatly dis-

\*Read at the meeting of the Third Councilor District Medical Society, Battle Creek, Oct. 6, 1908.

tended abdomen with almost continuous vomiting, etc. I believe such cases are much better served by elevating the head of the bed, sitting them up, giving them continuous saline per rectum and absolutely starving them. These advanced cases rapidly collapse after the abdomen is opened and the surgeon is blamed for the death, even though in many cases the relatives and attending physicians have all agreed that there is not one chance in a thousand.

"No. 2. I have operated on fourteen cases and have only lost two.

"Nos. 3, 4, 5 and 6. My method of operation is to open the abdomen through a modified Battle incision, get out the appendix as rapidly as possible, simply ligating it at its base; inserting either a Mikulicz gauze drain, which I regard as one of the best, or a split rubber tube containing a strip of gauze. The abdomen is then rapidly closed, the entire time of the operation not consuming more than fifteen minutes. No effort is made at irrigation. I use the Fowler position when the patient is very weak and then I simply elevate the head of the bed to an angle of 45 degrees. I use the Murphy drop method of rectal instillation as soon as the patient is brought to the bed. I have never had any favorable results in the use of antistreptococcic serum, and I have absolutely no confidence in the Morris treatment by scientific neglect, except in the very advanced cases in answer to your question No. 1."

Eisendrath evidently misunderstood Morris' treatment by scientific neglect, as his own method tallies very closely with the treatment Morris recommends (1), namely, simply tying off the stump and getting out as fast as possible, without irrigation or handling, leaving Nature to make the toilet of the abdomen.

J. H. Carstens, of Detroit, writes that he has no rule of operation; that it depends upon the organ from which the infection starts and the kind of microbe. He has not tabulated his cases. He says

he removes the diseased parts, and as a rule, drains. He sometimes uses the Fowler position, and generally does not flush the abdominal cavity after operation. He employs Murphy's rectal instillations; reports very decidedly favorable results in some cases from the use of antistreptococcic serum, and endorses Morris' treatment by scientific neglect. In concluding he writes: "All around I might say that no definite rule can be laid down. Every case must be judged by itself and treatment based on experience."

John A. Wyeth, of New York City, answered as follows: "In the treatment of widespread infection of the peritoneal cavity, the immediate indication is to remove the focus of infection, together with all septic exudate which may be encountered. If the location of the original point of infection be satisfactorily established, the incision through the abdominal wall should be made so as to permit free access to this location." Here follows reference to the method of removing gas and semi-liquid ingesta from the hyper-distended intestines. "In cleansing the general peritoneal cavity, the abdominal irrigator devised by Prof. Joseph A. Blake will be found most satisfactory." "In further answer to your query No. 1, there are no contra-indications to operation except a moribund condition of the patient. No. 2—I cannot give you the number of my cases with ratio of mortality. No. 3—Already answered." No. 4—He advises the use of the extreme Fowler position. No. 5—"Prefer to flush locally and rapidly with Blake's apparatus, and not flush the general peritoneal cavity." No. 6 (as to the use of Murphy's rectal instillation)—"Yes, I consider it exceedingly valuable." No. 7—Have not used antistreptococcic serum."

W. J. and C. H. Mayo, of Rochester, Minn., answered my questions through their assistant, E. S. Judd, as follows: "No. 1. We do not always operate at once for suppurative peritonitis. Contra-indications are: lowered resistance, shown



by blood count; extreme shock; and when the patient is walling off a condition that at one time seemed diffuse. No. 2—We have operated upon many hundred cases of this kind; several hundred each year. The mortality recently is about 3 per cent. No. 3—The method of treatment depends upon whether the condition is acute or more or less chronic. No. 4—We use the exaggerated Fowler position. No. 5—We do not flush out the abdominal cavity after operation. No. 6—We use the Murphy drop method of rectal instillation. No. 7—Our results from the use of antistreptococcic serum did not warrant the continuation of its use."

Thos. B. Noble, of Indianapolis, writes that he always operates except on patients "*in articulo mortis*." He uses local anesthesia whenever possible for incision, "to increase the rapidity of work." He does no unnecessary manipulation. He employs the Fowler position universally, "even though the heart be weak with pulse of 120 or 140." He never flushes the peritoneal cavity, but employs proctoclysis and intra-venous injections in severe cases. His results from the use of antistreptococcic serum are favorable in 50 per cent of puerperal cases and unfavorable in all others. He endorses Morris' treatment by scientific neglect.

Albert J. Ochsner, of Chicago, wrote such an interesting letter that I shall give space to most of it. He says: "My mortality at the present time in beginning diffuse suppurative peritonitis due to appendicitis is a little less than 2 per cent, and this mortality is confined entirely to patients who have received either food or cathartics, or both, after the beginning of the attack of appendicitis. Question 1—I always operate in suppurative peritonitis, but usually first place the patient in the Fowler position, wash out the stomach, place him on exclusive rectal feeding and upon Murphy's drop method until the pus becomes circumscribed in the lower portion of the abdomen. Question No. 2—I do not know the exact number of patients

suffering from diffuse peritonitis I have operated because I have not kept a record of all cases. It is somewhat difficult to answer this question because of the difference in classification. At the Augustana Hospital, where I have records of all cases, I have operated 112 with 78 recoveries and 44 deaths. This, however, includes only the advanced desperate cases of diffuse peritonitis which came under treatment three days or longer after the beginning of the attack. My Augustana records show 1,084 cases of diffuse peritonitis with 76 deaths. Of these, 112 (mentioned above) were advanced, with 44 deaths, and 972 simple diffuse peritonitis, not so advanced, with 32 deaths. Question 3—I simply make an incision, remove the perforated appendix or close the perforation in the perforated intestine or stomach, and insert glass and cigaret drain. In case it is difficult to remove the appendix, I leave this in place until later. Questions 4 and 5—I use the Fowler position. I never flush the abdominal cavity, although I did this with murderous results in a number of cases some years ago. Questions 6 and 7—I use the Murphy drop method constantly. I have had no favorable results from antistreptococcic serum. Question 8—The method referred to as "scientific neglect" has reduced my mortality from 16 per cent to 2 per cent when combined with gastric lavage, Fowler position, Murphy's drop method and exclusive rectal feeding, in all cases of perforative or gangrenous appendicitis with beginning diffuse peritonitis."

W. P. Manton, of Detroit, writes that he always operates if the general condition of the patient is such as to admit of operation. He cannot give the number of his operations or the mortality. In operating he simply opens the abdominal cavity and drains. He employs the Fowler position and "sometimes but not always" flushes the abdominal cavity. He has never used proctoclysis nor antistreptococcic serum, and does not endorse

Morris' treatment by scientific neglect.

Robert T. Morris, of New York, writes a characteristic letter: Answering your questions *seriatim*: 1. I make it a rule to operate in cases of suppurative peritonitis, and do not remember ever having done otherwise excepting in one case of appendicitis with pregnancy, some years ago. 2. It would be impossible to get cases tabulated for report now, as they amount to several hundred, in various hospitals and in private practice. My mortality rate for some years has been practically nothing, but a series of fatal cases may occur in the future. 3. Quick operating, small incision, no packing, one small wick drain. 4. I use the modified Fowler position, but not complete; too much work for the heart. 5. Abdominal cavity not flushed or even wiped after operation. Get in and out quickly, and let the capillary drain and atmospheric pressure do the rest. 6. Murphy's drop method of rectal instillation is of immense value; used it before Murphy described it. 7. Antistreptococcic serum is not on a scientific basis as yet; too many kinds of bacteria to reckon with. 8. Scientific neglect saves my patients. Hope it will save yours. It will not take long to find out."

Van Buren Knott of Sioux City writes that as early as 1902 he read a paper before the Western Surgical Society advocating the use of large soft rubber drainage tubes introduced at the most dependent point of the pelvis, combined with postural treatment in the exaggerated Fowler position. Answering my questions, he said: "No. 1. I operate in every case of suppurative peritonitis unless it is clearly evident that the patient is dying and will live only a few hours with or without operation. No. 2. I have operated upon 76 cases of this character with 5 deaths. No. 3. Through a convenient and ample incision, expose the source of infection and close same by accepted method. Pass hand rapidly to bottom of pelvis separating any adhesions

which may shut off the cul-de-sac or recto-vesical pouch from the rest of the peritoneal cavity. Insert a large soft rubber drainage tube one inch in diameter, split from end to end and carrying a loosely fitting wick of iodoform gauze into the lowest depths of the peritoneal pouch, and close the wound down to the tube. This tube is permitted to remain in place from seven to ten days." Nos. 4, 5, 6, 7, and 8. He employs the Fowler position, does not flush the abdominal cavity at the present time, although formerly he did so, employs rectal instillation, does not use antistreptococcic serum and does not endorse treatment by scientific neglect.

J. H. Kellogg of Battle Creek wrote: "1. I operate in suppurative peritonitis when I think the patient has even a small chance for recovery, using laughing gas with oxygen in severe cases. When the patient is moribund of course I refuse to operate. No. 2. From my recollection I think I have operated upon 12 cases, 2 of whom died. No. 3. My method of operation is free incision, free drainage, using both capillary drains and iodoform or iodine gauze." Answering queries 4 and 5, he does not employ the Fowler position and does not flush the abdominal cavity after operation. "No. 6. I have for many years used frequent enemas. I have also used rectal flushing by continuous irrigation. I think it an effective measure. No. 7. I have had good results from antistreptococcic serum in chronic conditions, but have not had an opportunity to try it in acute suppurative peritonitis."

John Young Brown of St. Louis always operates unless the patient is moribund. He writes that he has operated upon 32 cases of "Diffuse General Peritonitis" with a mortality of 5%. He removes the appendix rapidly and drains. He employs the Fowler position, does not flush the abdominal cavity after operation, uses Murphy's rectal instillation, thinks antistreptococcic serum of little value, and endorses Morris' treatment by scientific

neglect "in a measure."

Parker Syme of New York writes: "1. I do always operate in diffuse suppurative peritonitis. At Lebanon, I think that we declined to operate on but one patient, he being moribund. No. 2. I am sorry that I cannot give you the number of cases operated upon, nor the mortality rate. It has, however, been remarkably small. No. 3. My method of operation and treatment is to make a sufficiently large incision; to remove the appendix, using simple ligature. I pack so as to avoid intestinal obstruction and drain the site of the original abscess." He uses the Fowler position, does not flush the abdominal cavity, uses Murphy's rectal instillations, has not had successful results with antistreptococcic serum, and says he can only partially agree with the views of Dr. Morris. He says, "I operate on every case of appendicitis, no matter what period of the disease. I am a strong antagonist to the teachings of Ochsner in this particular. Our results have been so good that we have never thought of changing to any very different plan of treatment. We practically never lose a case of localized peritonitis or abscess. We believe that our good results are due to the care we take in protecting the healthy and uninvaded peritoneum."

De Forest Willard of Philadelphia, always operates except in moribund conditions. He has not complete records of cases with mortality. His method is "early and speedy operation; very free drainage." He employs the Fowler position and flushes the peritoneal cavity, but "not invariably." He uses Murphy's rectal instillations, says he is "not positive" as to the benefit of antistreptococcic serum and does not endorse Morris' treatment by scientific neglect.

Thomas B., and Joseph R. Eastman of Indianapolis always operate unless the patient is actually moribund. They have operated upon 53 cases with a mortality of 14 per cent. They employ free irrigation except when adhesions are too dense,

and use a large soft rubber drain in the cul-de-sac, reinforced by gauze. They use the Fowler position, and flush out the abdominal cavity, although formerly they did not. They do not use rectal instillations: simply copious and repeated enteroclysis, and do not employ antistreptococcic serum neither do they endorse Morris' treatment by scientific neglect.

R. C. Coffey of Portland, Oregon, always operates except in hopeless cases. He says he has operated on "Probably 20. Have not statistics at hand. There should be no mortality if the case is seen early." In operating, he searches for the starting point of the infection, quickly drains from one of the flanks or pelvis depending upon the point principally affected. He employs the Fowler position if the starting point of the infection is below the umbilicus, while if in the upper part of the abdomen he uses the lateral position with head elevated. He never flushes the abdominal cavity, and always uses rectal instillations. He says, "I use a number of gauze wicks in a bundle, and cover with rubber tissue and then pull out a few at a time for two or three weeks, never replacing drains after removal."

George Tully Vaughan of Washington, D. C., says: "1. I operate in all cases of suppurative peritonitis, but not always at once. I think often a time can be chosen which will give the patient a maximum of chances for recovery. If his temperature and pulse are improving, vomiting has ceased—in other words, if the patient's symptoms are improving, I should wait for circumscribed abscesses. If the patient's symptoms are getting worse or at a standstill, I should operate at once. No. 2. I have operated on 31 patients, with 18 deaths and 13 recoveries—mortality 58 per cent. No. 3. My method of operating depends upon the cause of the peritonitis if I know it—whether appendicitis, typhoid perforation, or what; but in general it is to let out pus and drain, and not damage the tissues by pulling and



hauling and breaking up adhesions. In appendicitis, if the appendix is not easily found, I do not look for it; in other cases when the cause is obscure, I do not trouble the bowels in order to find it. No. 4. I do not employ the Fowler position. I do not agree that it is necessary and I believe that the same drainage may be obtained by raising the head of the bed—but I do not believe *that* is necessary. No. 5. As a rule I do not flush out the abdominal cavity after operation. No. 6. I do not use Murphy's rectal instillations, but I do use a method I used before I ever heard of Murphy's method, namely, the injection into the rectum every hour of from two to four ounces of salt solution. No. 7. I have not used antistreptococcic serum, as at this time I do not think it of any value. The future may furnish something of value in this line."

J. B. Murphy of Chicago writes: "In reply to your questions I would say to—

"No. 1. Yes, I always operate. There are no contraindications.

"No. 2. I have operated on 56 consecutive cases of General Diffuse Perforative Peritonitis, with two deaths."

No. 3. He makes his incision over the seat of the perforation when this can be determined. If the leak is in the appendix, he clamps this, ligates it in the crease made by the clamp, amputates, and drops the cecum back into the peritoneal cavity. He says that burial of the stump usually entails too much time and manipulation to warrant its execution. If the leak is an intestinal or gastric ulcer, he closes by a double or triple row of Lembert sutures. He never permits the opening of a perforation to remain patent. In draining, he uses a large fenestrated or split rubber tube passed to the bottom of the pelvis.

No. 4. He always employs the Fowler position.

"Nos. 5 and 6. I do not flush, and do not sponge. I use continuous proctoclysis. It is not a drop method, as you will note.

"No. 7. I use Streptolytic Serum."

Let us analyze these letters. In replying to question No. 1, asking whether they always operate in suppurative peritonitis and whether they have any contraindications to operation, 13 answered that they invariably operate unless the patient is moribund, four operate except in the presence of certain contra-indications, two wait until the worst stage is past before operating, and one thinks that more would recover without operation. Question 2. (On how many cases have you operated, and with what mortality?) Eleven could not give the exact number of cases. The other nine reported 1,358 cases, with 114 deaths, or a mortality of 8.4 per cent. The Mayo brothers reported their mortality as 3%, but were unable to give the exact number of their cases. Query 3. (What is your method of operation and treatment?) Eighteen answered that they open and drain with more or less repair of the break which spread the infection. Two did not give their method. Query 4. (Do you employ the Fowler position?) Fourteen always employ it, four sometimes use it, and two have not tried it. Query 5. (Do you or do you not flush the abdominal cavity after operation?) Thirteen always do not, one generally does not, one flushes locally, two sometimes flush the cavity and thirteen always do. Query 6. (Do you employ Murphy's method of rectal instillation?) Fourteen always do, two sometimes do and four do not. Query 7. (Do you have favorable results from the use of antistreptococcic serum?) One did not answer the question, sixteen have had no favorable results from its use, two have had good results in some cases and not in others, and one (Murphy) always employs it. Query 8. (Do you endorse Morris' treatment by scientific neglect?) Eight did not answer the question or were not familiar with the method, five endorse the treatment, one partly does, and six do not.

Now let us separate the wheat from the chaff, selecting the seed which has brought forth the largest harvest of recoveries. In doing this we shall not go far afield if we choose a mode of procedure somewhat as follows:

Give no cathartics, food or even water by mouth at the onset. These measures increase peristalsis and, consequently, intra-abdominal strain, as well as dissemination of the infection. Wash out the stomach for the persistent vomiting, place the patient in the Fowler position and operate as soon as possible. Do not wait for shock, which is one of Death's last warnings, but look for the early symptoms which Murphy gives (2) as sudden and severe pain, nausea and often vomiting, local tenderness, circumscribed flatness on piano percussion, elevation of temperature above what the patient had before, hyperleukocytosis and absence of borborygmus. The importance of early diagnosis and early operation is pretty well understood today by the majority of surgeons, but the general practitioner, who is often the first one to see these cases, needs a great deal of education along this line. In operating, open the abdomen over the origin of the infection, if possible, and repair the break if this can be found without too much handling of the abdominal contents. The item of speed is a vital one. In a gangrenous appendicitis, Morris, Eisendrath, Ochsner and others merely tie off the appendix and drop it back into the peritoneal cavity. In still more urgent cases Morris (1) simply clamps the stump with a hemostatic forceps, drops hemostat and appendix into the cavity and removes them the following day. The fibrin should not be disturbed nor the pus wiped out.

Experience has shown that flushing the abdominal cavity is a dangerous procedure. Many surgeons, among whom are Van Buren Knott, Eisendrath, the Mayos, and others, have discarded flushing altogether, although they employed it as a

matter of routine a few years ago (3). Whether it is the dissemination of bacteria which it accomplishes, or the washing out of our good friends and protectors, the phagocytes, or the dilution of the auto-protective fluids of the body, as the experiments of Dudgeon and Sargent (8) might suggest, we shall not know positively until animal experiments have taught us, but certain it is that many surgeons have reduced their morality 40 and 50 per cent by discarding their former procedure of giving the intestines a salt water bath after operation. I have only to refer the skeptical to the published reports of Le Conte (4), Mumford (5), Stuart McGuire (6) and many others.

After we have gotten into the abdominal cavity, let us do as he did who jumped into a bramble bush—let us get right out again. How many times after we have done a most scientific, aseptic operation, carefully wiping off all the fibrin in sight, mopping up all the pus we can find, eviscerating the patient, bringing out loop after loop of intestine to inspect, using antiseptics perhaps, and then flushing out the peritoneal cavity with gallons of saline solution—how many times has Nature tried to show us the folly of all this misguided exertion by letting the patient die on our hands. About all Nature asks of us in suppurative peritonitis is an opening to relieve tension and a drain of some kind to help her carry away the toxic material, and she can then get along quite comfortably without us.

Unless the operative opening is at the lowest part of the abdomen, one or two stab wounds may be made just above the pubes, and drainage tubes, preferably split and containing a gauze wick, introduced through the openings.

Drainage should be, not only by material, tube or wick, but by posture. It is scarcely necessary to mention the well-known researches of Robinson (7), Muscatello, and others, which have shown the

diaphragmatic region to be the place of greatest absorption in the peritoneal cavity. And it is for this reason that, by placing the patient in a sitting posture, we help Nature retard the absorption of toxins as well as assist drainage. This is so well known at the present time that only two surgeons wrote me that they do not employ the Fowler position.

In the after treatment there is one procedure of great importance, namely, Murphy's method of rectal instillation. We cannot say that we are doing the utmost for our patients unless we employ it. As given by Murphy (who, by the way, is not the originator of rectal instillations, but has perfected and systematized the method), it consists in the slow introduction of as much normal salt solution by rectum as the patient will take without rejection. The amount varies with the individual, but usually runs from eight ounces to a pint and a half per hour. The syringe or irrigator is suspended at such a height—usually from three to twelve inches—above the rectum—that the weight of the column of water just overcomes the intra-abdominal pressure. The rectal tube should have several small holes in its sides to prevent clogging with feces. The flow of solution should not be regulated by clamping the tube, as is usually done, but simply by raising or lowering the irrigator, thus allowing the intestinal gases to escape and bubble to the surface of the solution. The irrigator

is kept warm by surrounding it with hot water bottles or, as the Germans do, by placing it in a bucket and packing sawdust or other non-conducting material around it to retain the heat. I have gone somewhat into detail in this matter because of its exceeding value when properly given.

The administration of antistreptococcic serum has not been attended with satisfactory results in the practice of most surgeons. If it were used only in streptococcus infections the results might be better perhaps, but even in peritonitis due to the streptococcus the serum is not a distinct success at the present time, and might well be discarded.

In conclusion, let me emphasize the fact we are so apt to forget—that we are simply co-workers with Nature. And so we must not work *against* Nature, but *with* her. Let us not break down any of her delicate fibrin defenses nor wash out her phagocytes and bactericidal fluids. Let us study her plans and help her along her own paths—and the 100 per cent mortality in diffuse suppurative peritonitis will soon be a dim and ghoulis memory of the dark ages of surgery.

1. Morris, Journal A. M. A., Aug. 22, 1908
2. Murphy, Surg., Gynecol. & Obstet., June, 1908
3. Young, Jour. A. M. A., Aug. 26, 1905
4. Le Conte, Annals of Surg., Feb., 1906
5. Mumford, New York Med. Jour., Jan. 12, 1907
6. Stuart McGuire, Jour. A. M. A., Mar. 28, 1908
7. Robinson, "The Peritoneum," Part I, 288
8. Dudgeon & Sargent, "The Bact. of Peritonitis," '05

**A Study of the Urinary Acidity and Its Relations.**—Henry R. Harrower, of Chicago, considers a quantitative determination of the acidity of the urine in a twenty-four hours' specimen of great value, and absolutely necessary in the treatment of most diseases. The index of urinary acidity varies with different states of metabolism, especially in conditions of autointoxication. In 35 per cent. of the cases examined

by the author albumin and casts accompanied high degrees of acidity. There is a distinct association between high acidity and putrefaction of intestinal contents; in diabetes an excess of acid is the rule; the reduction of acidity is an important prophylactic measure. The best method of estimating acidity is by titrating a definite quantity of urine with an alkali solution of known strength, using phenolphthalein as an indicator.—*Medical Record*, June 5, 1909.



## APPENDICOSTOMY\*

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Appendicostomy is an operation by which the appendix is fixed in the abdominal wall, its protruding end excised, and its lumen utilized as a means of irrigating the colon. The operation was devised as a substitute for right inguinal colostomy, suitable to those cases of colonic disease in which it is not necessary or desirable to have a fecal outlet in this region. It was performed for the first time by Robert F. Weir, and since that time it has been used by a number of surgeons with very satisfactory results.

### Indications.

Appendicostomy has been employed chiefly in amebic dysentery, muco-membranous colitis, and syphilitic ulceration of the colon, and in these conditions it has proved almost uniformly successful. According to Dr. James Tuttle, this operation is indicated in all chronic inflammatory diseases of the colon. Dr. Tuttle has had more experience with it than any other surgeon, and his confidence in its efficacy in this class of cases seems to increase. It is well-known that these conditions are seldom amenable to treatment by non-operative measures. In a good many cases a degree of temporary relief is obtained by rigid adherence to a prescribed diet, medication, and irrigation per rectum, but very rarely is a permanent cure effected in this way. The only curative treatment of chronic inflammatory disease of the colon, after

it has become thoroughly established, is surgical. That is to say, when there are unmistakable signs of chronic colitis, with quantities of mucus in the stool or blood and pus, and constant or periodic diarrhea has continued for a year, a cure will not be affected without an operation.

There are three surgical procedures that have been used in the last decade.

First—Extirpation of the colon. On the ground that the large bowel is at best a useless organ, Dr. Arbuthnot Lane advocates its complete extirpation in all chronic cases. He makes an anastomosis between the ileum and the sigmoid. He has performed this operation many times with good results. This procedure is too formidable to gain much favor with the profession.

Second—Right inguinal colostomy or cecostomy. By this operation an artificial anus is established on the right side, by means of which physiological rest is secured for the colon. At the same time complete irrigation can be practiced. Physiological rest and irrigation for a few months will establish a cure in almost all cases. However, a colostomy in this region is a most repulsive condition on account of the liquid condition of the stool. In addition to this the danger of infection is much greater than in a colostomy on the left side. Another objection to this operation is the difficulty of closing the artificial anus.

Third—Cecal fistula. Some years ago Kader devised a method of forming a fistula into the cecum through which irrigation of the colon can be carried on and through which fecal material does

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\*Read at the Manistee meeting of the Michigan State Medical Society, June, 1908.

not escape. In this Kader operation an opening is made into the cecum, the serous coat is inverted and a tube inserted and retained. In this way a valve is made which effectually prevents the escape of the bowel contents and at the same time permits irrigation of the colon. The inverted serous coat forms a valve.

It is manifest that these operations—extirpation of the colon, right inguinal colostomy, and the Kader cecal fistula, are formidable procedures, difficult to perform, and attended by considerable danger. Appendicostomy meets the indications for which these operations were performed, is not difficult to do, and is practically free from danger.

The opening of an appendicostomy may be obliterated at any time when it is thought advisable to discontinue the irrigations. This is performed without any operation, and in this respect it is in marked contrast with the difficult and dangerous surgical procedure that is required to close an artificial anus on the right side. Accordingly appendicostomy is indicated in many cases of inflammatory disease of the colon in which a surgeon would hesitate to recommend a colostomy. The opening in the appendix supplies a means by which the colon can be irrigated easily and thoroughly and as frequently as may be desired.

However, there are certain mild cases of mucous colitis of comparatively short duration which I believe can be cured by irrigation per rectum, proper diet and medication. At least I have a number of such cases that are apparently cured after treatment of this kind. In all severe cases of chronic colitis by which the patients are kept in prolonged misery, weakness, or suffering, appendicostomy is unquestionably indicated. In October, 1907, I used appendicostomy on a patient for the relief of chronic ulcerative colitis with which there was associated chronic

ulcers of the rectum. The irrigation through the appendix effected a speedy relief of the diarrhea, and the patient's general condition was greatly improved. However, there was no improvement in the condition of the rectum, and after several months during which the irrigation was used on an average of once in two days, there seemed to be an aggravation of the proctitis. The method of irrigation was modified in various ways without any benefit to the rectal ulcers. Tubes of various sizes and lengths were used in the rectum to carry off the irrigating fluid, but none of these seemed to protect the rectum from irritation. The fluid would invariably distend the rectum and escape around the tube. From my experience with these cases I am convinced that colonic irrigation through the appendix is most effective for the cure of chronic inflammatory disease in the cecum, ascending, transverse, and descending colon. For disease of the sigmoid flexure its efficacy is not so marked. The decline in the therapeutic value of the irrigation as we reach the lower portion of the large bowel is due to the fact that the active peristalsis caused by the fluid sweeps the colonic contents to the sigmoid and rectum where there is some resistance to the flow. Accordingly there is undue distention of the rectum. Then there is generally retention of a portion of the fluid and reinfection may take place. In addition to this there is the fact to be considered that liquids act as a foreign body in the rectum, whereas in the cecum and ascending colon the normal contents are generally liquid. Appendicostomy provides a means by which a perfect lavage of the colon can be effected daily as long as it may be considered desirable, with but little inconvenience or discomfort. Thorough cleansing of the colon by irrigation per rectum is possible, but is very difficult to obtain and is impracticable. I believe, therefore, that Dr. Wier and Dr. Tuttle, by means of this

surgical procedure, have provided a method of treating certain very distressing diseases of the colon heretofore beyond the resources of the profession.

#### Technique of Operation.

The abdominal incision should be made so as to give the most ready access to the appendix. Dr. Tuttle recommends the incision to be made an inch and one-half to the inner side of the anterior superior spinous process of the ilium, and at right angles to a line extending from this process to the umbilicus. An incision in this location usually admits the fingers into the abdominal cavity just to the outer side of the cecum, and the appendix can be immediately brought into the wound without any unnecessary manipulation of the intestines. As these patients are generally exhausted by prolonged illness before the operation is performed they do not endure much handling of the bowels. Then in this operation the cecum is anchored to the anterior abdominal wall and it has been suggested that there might be danger that a loop of intestine would get entangled around this anchorage. Such a danger is diminished by having the cecum attached well to the outer portion of the abdominal wall. It is necessary to have the abdominal incision close to the cecum, otherwise the passage along the appendix would not be direct and there would be difficulty in inserting the catheter. Accordingly it is recommended to locate accurately the cecum before the abdominal incision is made, so that when the appendix is fixed in the abdominal wall it may form a direct line to the bowel. The length of the abdominal incision depends upon the nature of the case. In the majority of cases the incision should be short, for there are usually no adhesions, and all that is required is an opening sufficiently large to admit two fingers. Having drawn the appendix into the wound the second important part of the technique is encountered and concerns the mesoap-

pendix and the appendiceal arteries. In the majority of cases there is but one appendiceal artery. It extends along the free margin of the mesentery, giving off branches to the appendix. These branches are at right angles to the main artery, and form a free anastomosis in the wall of the appendix. Some of the earliest papers on this subject recommended tying the appendiceal artery and the separation of the appendix from its mesentery. An examination of this arterial supply will convince any one that to cut off the main artery must endanger the whole distal end of the appendix. As long as the gangrene is limited to the terminal half inch no bad results will follow, but in some cases I would hesitate to tie the main artery. My experience leads me to believe that it is not necessary to interfere with the appendiceal artery or the mesoappendix unless it is found impossible to draw the appendix into the wound with the mesentery intact. Two sutures on either side of the base of the appendix serve to secure the adhesion of the cecum to the abdominal wall. The abdominal incision is closed layer by layer and the appendix sutured, care being taken to avoid any constriction. It is safer not to open the appendix within forty-eight hours after the operation. It may then be excised without an anesthetic, local or general. The remaining portion should extend about half an inch beyond the surface of the skin. The caliber of the appendix may be increased by the passage of gum elastic catheters. Warm sterilized water serves as well as any of the antiseptic solutions for irrigation in the majority of cases. I have found that at first the water in the colon caused violent peristalsis. In fact the water seems to be carried from the cecum to the rectum by peristalsis and not by the force of the irrigator or gravitation. After the use of two or three quarts the water comes away clear. The use of a large amount of water generally produced some irritation of the sphincteric region of the rectum.



This may be avoided by keeping a proctoscope in the rectum during the irrigation. In a case of chronic ulceration of the rectum and colon I found that irrigation through the appendix cured the colonic disease. The evidence of colitis disappeared, but the proctitis was apparently aggravated. In addition to this last feature there are some other interesting phenomena connected with appendicostomy. Stretching of the appendix produces pain in the region of the umbilicus or often a little to the left of the median line. Sometimes a colicky pain is felt in the epigastrium. As has already been stated, the irrigation always produced violent and somewhat painful peristalsis in the colon. By means of an appendicostomy the colon can be freed from fecal material in less than twenty minutes. This can be accomplished only occasionally by irrigation per rectum.

#### Oral Administration of Antitoxins.

Studies in anaphylaxis have called our attention to the dangers of serum injections and have led to experimental work the object of which has been to discover some administration of sera that would minimize or remove these dangers.

McClintock and King (*Jour. Infect. Dis.* 1909, VI. 46) report experiments on the oral administration of antitoxins that have an important bearing, if they are confirmed, upon this matter, and point to a method that apparently removes all danger. Their communication is not suited to a short review. The conclusions are as follows:

(1) Toxins and antitoxins when given by mouth are usually rendered inert by the digestive processes. Their therapeutic or immunizing value is uncertain and not to be relied upon.

(2) If digestion is inhibited, which may be readily accomplished by the use of appropriate drugs, toxins and antitoxins are absorbed unchanged and apparently in sufficient quantity, and with such uniformity as to warrant the use of this method for therapeutic and immunizing purposes.

(3) In treating children with antitoxin per mouth, the following method has given uniform and satisfactory results; One half-hour before

The opening of an appendicostomy can be closed by one application of nitric acid to the mucous membrane. In this respect it is in marked contrast with colostomy.

The results obtained by appendicostomy have demonstrated that it is an important advance in the treatment of amebic dysentery; however, it has not been in use sufficiently long to have secured its definite place in the treatment of colonic disease. From a theoretical standpoint it is inferior to colostomy in that it does not afford complete physiological rest to the diseased portion. When the cause of the chronic inflammatory disease of the colon is imbedded in its wall, a colostomy, when possible, is indicated; when, however, the perpetuation of the inflammation is due to the irritation of the contents of the colon, appendicostomy fills the requirements.

administering the serum the child is given one glass of 1 per cent. sodium bicarbonate solution. When antitoxin is given there is added to it one minim of fluid extract of opium and from four to ten minims of a saturated solution of salol in chloroform. When possible no food should be given for at least four hours before administering the serum.

(4) In nineteen children and hundreds of animals used in these experiments, there was no evidence of any "serum sickness" or anaphylaxis.

(5) In our opinion the oral method of administering antitoxins of tetanus and diphtheria is the preferable one for prophylaxis—

(a) On account of the absence of danger and the ease of administration.

(b) Because the cost may be materially lessened.

(6) The hypodermic method of administering sera for curative purposes is the only one to be recommended unless extensive clinical experience should show that the oral method is especially efficacious.

(7) A relatively high degree of immunity may be produced in animals by the oral administration of toxins if the absorption of the same is promoted by such means as we have suggested.—*Jour. Inf. Diseases*, vi., p. 46.

## THE VALUE OF PHYSICS APPLIED TO THE PRACTICE OF MEDICINE\*

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A physician must be a man of action, one versed in scientific truths, manipulatory skill, experimental methods; he must be fully competent to act without first consulting a reference book; he must possess the ability to generalize from observed phenomena, the capacity of close and accurate observation, and of systematic methods, and in no way can he better cultivate in himself a capacity for these things than by laboratory practice. Much, if not all, of this is taught in physics. Physics also develops the power of logical thought in drawing conclusions from observed data; it affords an opportunity for valuable practice in the systematic recording of observations; it stimulates the ability to express one's thoughts in concise and unambiguous terms; it teaches neatness and dexterity of manipulation. Practice of this kind makes a man independent and furnishes him with just the mental equipment needed in the life of a physician. This training is certainly highly essential in the general make-up of a physician. Does not, and should not, every successful and progressive physician put into practice each and every one of these acquirements during every day of his practice of medicine and surgery?

One of our members recently said to me, "All men I now divide into two classes, according to whether they dodge my automobile or not." "And how do you classify them on that score?" said I.

"The quick and the dead," said he. Well, I believe we can safely divide all physicians into two classes, according to whether they dodge putting into their actual practice the application of the fundamental principles of physics, or are simply content to be knocked out of the way and defeated by the multitude of things in both medicine and surgery which they could easily and successfully overcome would they, and could they, intelligently apply those principles. Times have changed, and are still rapidly changing, and the physician who succeeds now is the man who seizes every opportunity offered in gaining knowledge to combat disease, and who never lets go until he has mastered every detail that is within his power.

We will not attempt in this short paper to enumerate in detail all of the ways in which a physician can apply the principles of physics, and find them of value in the practice of medicine, because the field is too broad and extensive, but we will, in a general way, endeavor to point out some of the more important, and suggest in a way how the physician is dependent upon them, although probably the average practitioner seldom stops to consider their application, or how greatly his success or failure depends upon them. It is true that many and many a physician applies these principles time and time again, day in and day out, and yet who does it entirely unconsciously, or else is wholly ignorant of the fact that he is making use of anything that pertains in the least to physics.

\*Read before the Ottawa County Medical Society, Nov. 10, 1908.

Dr. J. S. Haldane, in his address as president of the section of physiology of the British Association, printed in *Nature* (London, October 1, 1908), says: "When we look back on the history of physiology it seems perfectly evident that physiological progress has been dependent on the progress of physics and chemistry. On this point there is no room for doubt. Physiology depends at every turn on physics and chemistry, and its future progress will certainly be equally dependent on advances in physical and chemical knowledge. This consideration has, I imagine, weighed very heavily in the minds of those physiologists who have concluded that physiology is nothing but applied physics and chemistry."

Such properties as porosity, absorption, diffusion, and osmosis play an important part in the digestion and assimilation of medicines and nutritive media administered by the physician, and if the tissues of the body are not kept as nearly as possible in their normal condition, how greatly will their adaptability in favoring the physical forces which influence porosity, absorption, diffusion, and osmosis be decreased, and if they be decreased in these regards, it is easily foreseen that the general nutrition will suffer, and any medication will fall far short of producing its desired effect. Therefore, on this account it greatly behooves the physician to study these physical properties and the laws which govern them, and thus take advantage of every possible means to render the conditions and circumstances as nearly normal as possible, so that every medicine given or any nourishment taken will be properly digested and assimilated and produce its most curative or remedial result.

Osmosis, together with the laws of osmotic pressure, is a wonderful and intensely interesting study in itself, and only this past summer did a scientist tell me that he had spent practically his whole life studying this one subject, and

that today he knew but little more about it than when he began.

A physician should also fully understand the laws of liquids, gases, pressure of fluids, and capillary phenomena, because a full comprehension of these can be of great diagnostic value. How necessary it is in making a physical diagnosis to understand the physical properties of sound. A physician cannot successfully interpret his findings if he does not recognize differences in pitch. If he does not understand the differences in pitch, how can he decide whether the medium of mission is gas, liquid, or solid?

If one is to treat diseases of the ear, how can he expect to be successful in the majority of cases if he does not understand and apply the principles of vibration, intensity, and loudness of sound?

A surgeon would surely be of little worth if he did not understand and possess the ability to apply his knowledge of the principles of physics. Taking an accurate measurement would seem to be a very easy and simple thing, and yet it is marvelous how many various answers will result from having a class of thirty or forty students measure the length of a table or a straight line. A complete understanding of mechanical advantage, the laws of levers, elasticity, tenacity, and the workings of the siphon are surely of every-day application in the life of a surgeon or in that of the general practitioner.

How vastly important are the fundamental principles of heat and temperature. The little thermometer which is used daily by every physician is certainly an indispensable article. How often do we make use of the principles of evaporation, and the transmission of heat!

In this day when such great stress is being laid on hygiene and sanitation, it behooves every practitioner to study the subject of ventilation, for how few of our public buildings and residences are properly ventilated.



The subject of light also holds an important place in the consideration of a physician, for we are very frequently dealing with questions of reflection of light, focus, lens, color, and more particularly are we making use of the microscope, the workings and principles of which are so very important to physicians of today. The time is coming, and is not far distant, when much more attention will be given to this subject of light, especially in its application to the lighting of school-rooms.

Then, again, in this age when such strides are being made in the application of electricity, the doctor must understand

its uses in the practice of medicine, for its applications in that line are becoming more numerous every day.

The value of physics in the practice of medicine is, indeed, great, and far-reaching, as we have shown; there is scarcely a single principle of physics that is not made use of by the practicing physician.

Had we the time, it would certainly be intensely interesting to go into this subject much deeper and discuss in considerable detail how and where application of the many laws and principles of physics are applicable and serviceable in the practice of medicine.

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## HYPERTROPHIC STENOSIS OF THE PYLORUS IN INFANTS\*

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W. M. DONALD, M.D.,  
Detroit.

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This disease is well known to pediatricians, but seems to be practically unknown to the great mass of the profession. There has been practically nothing new discovered, or recorded, concerning it during the past two years. I have to report, however, a series of cases occurring in one family, which seem to be unique in the annals of the disease, and which should prove interesting, if not valuable.

Since the disease seems relatively unfamiliar to the practitioners, I will sketch shortly the symptomatology and the most approved treatment of the condition; and then report, somewhat in extenso, my own cases.

This disease of Hypertrophic Stenosis of the Pylorus in infants seems to have been practically unknown to anyone until about five years ago. The symptom-com-

plex of the disease was very well known, but careful clinical research, and careful search by autopsy, had failed to reveal the cause of the condition already suggested.

The symptom-complex was as follows:

The children in early infancy (in 80% males) commenced to vomit within the first month of life, usually about the end of the third week. The vomiting was explosive, but not accompanied by nausea; came on at progressively shorter intervals, and was accompanied by sweet breath and constipation. The children had no evidence of gastric catarrh, nor were they subject to the simple regurgitation of infants. They suffered from progressive wasting; from dilatation of the stomach; and showed, sooner or later, a peristalsis of the stomach, visible through the abdominal wall. Most of the cases died, being unamenable to treatment. Some English genius, his name

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\*Read at the Manistee meeting of the Michigan State Medical Society, June, 1908.

now being unknown to me, discovered, after careful search, that all of these cases showed a more or less marked hypertrophy of the pylorus. He discovered that this hypertrophy, while great, was usually confined to the circular muscular fibres of the pylorus; but that, if the patient survived the disease sufficiently long, the spasm of the pylorus (which was apparently a part of the disease) threw the mucous membrane of the pylorus into longitudinal folds, which in many cases acted as a sort of ball valve, occluding completely the pyloric opening. This valve-like arrangement of the pyloric folds accounted for the fact, which had been somewhat of a puzzler, that many of these cases would permit of the passage of a good-sized probe, or even of a good-sized lead pencil, and would still show the evidences of pyloric occlusion. I show you here today in one of my cases a condition of this kind, where a pencil is readily inserted, but where no fluid could be forced from the stomach into the duodenum. This patient succumbed to persistent vomiting within a few days of its birth.

One observer has recently described the appearance of the pylorus in these cases, as it dips into the duodenum, as very similar to the appearance of the os uteri as it dips into the vagina. This, again, I will demonstrate to you with a microscopic slide, which I have had made from one of my cases. A singular condition of the disease is its appearance so often in males—a point which I emphasize on account of its etiological value—at least 80% occurring in the male sex.

The English observers, who are practically alone in their work in this field, seem to have agreed fairly well in dividing these cases into three types:

First, a simple spasm of the pylorus, amenable to simple medicinal and dietetic treatment.

Second, cases characterized by true hypertrophy of the pylorus, moderate in

degree, such cases yielding with difficulty to the same medicinal and dietetic treatment.

Third, cases of severe hypertrophy often having this ball-like closure of the pylorus, and which can only be helped by resorting to surgical measures.

That the disease is not common, as diseases go, is evidenced by the fact that at the Great Ormond Street Hospital for sick children, in London, England, only thirty-nine cases are reported in ten years. Of these thirty-nine cases, thirty-five were males; and of the thirty-nine cases, thirty-four died. It must be remembered, however, that these thirty-nine cases included all of those which were reported before clinicians understood the true nature of the disease, and before they understood the scientific treatment of the same.

Etiologically little is known. Family history seems to have no bearing on the disease; and the fact of its more frequent occurrence in males is practically the only etiological factor thus far recorded.

One observer has suggested that the disease may be a reversion to ancestral type, a true atavistic tendency, comparing, as he does, the pylorus to the gizzard in the bird. One must confess that this seems rather far-fetched.

The treatment of the disease is medicinal and surgical. In the milder cases, the treatment is both medicinal and surgical, or, rather, dietetic and surgical. The frequent feeding of small quantities of food, non-irritating in character, and daily washing of the stomach through a tube, as a rule, gives excellent results. In the more severe cases, frequent changes of the food may be indicated, and still more frequent feedings in smaller quantities; and occasionally sedatives or anti-spasmodics. In the third class, the still more severe type, it would seem that nothing can help but surgical measures, and in these cases

expert opinion seems to be divided between dilatation of the pylorus through the stomach; section of the redundant folds of the mucous membrane of the pylorus (what is known as pyloroplasty); posterior gastro-enterostomy; and excision of the pylorus.

### Report of Cases.

The cases I wish to report occurred in a family who have been patients of mine during the last six years. The family history is absolutely negative. The parents are both healthy, and three children, now living, are likewise perfectly healthy. The first child born to them in 1897 is living. The second child was born in 1899 and lived five months, vomiting at intervals during that period. This seems to have been a case, which, had the disease been known at the time, could have been helped by dietetic measures. A postmortem in this child revealed a dilated stomach and empty intestines, which meant, almost to a certainty, pyloric stenosis, but the patho-

logical overgrowth of the pylorus was not recognized, and the cause of the difficulty was considered too obscure to solve.

The third child was a boy, born in 1901, living seven days; and likewise vomiting from birth.

The fourth and fifth children were girls, born healthy, and are still living, aged two and five years.

The sixth was a girl; was delivered by a colleague during my absence from the city in 1906; and lived but three days, vomiting from the hour of its birth.

The seventh was a girl, was delivered by me on December 12th, 1907, and lived until December 17th, 1907 (five days). The postmortem on this last child disclosed the condition which I have described to you, and I present to you today the stomach in this case. There is no question as to the character of the disease in this last case, which I attended. As for the others, the symptoms are practically positive as to the identity of them, which we have proven by post-mortem.

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**Pediatric Don'ts.**—Karl H. Goldstone, M. D., in the *Journal of the Medical Society of New Jersey*, says that it is just as important to realize what not to do, as it is to know the accrued facts. Some of the things one is not to do follow.

Don't, above all things, fail to take a complete anamnesis before attempting to arrive at a diagnosis. In no other branch of our science does a detailed history go further in aiding to formulate a correct understanding of disease in pediatrics.

Don't fail to remove every vestige of clothing before attempting to examine a child. You may overlook evidences of disease which have vital import.

Don't under any circumstances fail in your routine to examine the vagina in a female child. Mothers either from false embarrassment or neglect, fail to call attention to the presence of any discharge, and don't lose sight of the fact that gonorrhea, while amenable to treatment in the early part of its course, later on is almost impossible to cure.

Don't ever neglect to percuss for the thymus in infants. Remember that a large percentage of sudden deaths in infancy is due to hyperplasia of the thymus (Baginsky-Grawitz).

Don't forget to put your finger in the throat of a child who comes to you with a history of a sudden aversion to taking the breast, and in whom the cry is peculiar, and who has dyspnea

without there being signs in the lungs. I find that retropharyngeal abscess is more frequently overlooked than any malady of childhood. (See author *N. Y. Medical Journal*, February 16, 1906.)

Don't hesitate in making a rectal examination in a child who is passing blood via the anus. Intussusception is another condition that is rarely recognized until brought to the hospital, and then the child is usually in a moribund state.

Don't fail to take a culture of the throat in any infant brought to you with a dry metallic cough and a slight rise in temperature. Laryngeal diphtheria is much more common than one would be led to believe from reports.

Don't resort to artificial feeding unless absolutely compelled to; poor mother's milk is oftentimes better than the best regulated artificial feeding. (Cammerer.)

Don't, if you consider yourself a reputable physician, ever resort to the term "He will grow out of it." The only things that children grow out of is their clothing.

Don't expect to find the morbus caeruleus present in every case of congenital heart disease. For as Jules Simon, the French writer, has shown, there may be cyanose blanche or pallor of the skin.

Don't designate every twitching in a child as chorea. Remember as a result of mimicry, children develop habit spasm.



## INTESTINAL OBSTRUCTION\*

A. J. HERRINGTON, M. D.,  
Bad Axe.

Intestinal obstruction, as its name indicates, is an interference with the passage of the bowel contents. Murphy, in my opinion, gives the clearest description of this condition.

The obstruction may be: First, adynamic or paralytic; second, dynamic or spasmodic; third, mechanical.

### **Etiology.**

(a) The adynamic form constitutes 68 per cent; it can be caused by an interference with the nerve supply, as injuries to the spinal cord or afferent nerves. (b) Reflex: Renal or hepatic colic, twist of pedicle of tumors; strangulation of omentum; compression of ovary; diaphragmatic pleurisy. (c) Sepsis; ruptured appendix, gall bladder, or pus tubes; perforation of ulcer of stomach or intestines; wounds of the peritoneum.

The dynamic constitutes 2 per cent, toxic as in lead poisoning or tyrotoxon.

The mechanical constitutes 28 per cent, hernias, twists, intussusceptions, bands, tumors (internal or external to intestines); cicatricial narrowing, foreign bodies and fecal impaction.

### **Symptoms.**

Pain is usually sudden in onset, paroxysmal in character. It grows in intensity, especially in mechanical form. Vomiting; first, ordinary contents of stomach, then bilious material, finally intestinal contents. It is impossible to get a movement of bowels, except possibly

a slight amount from below the obstruction. Tympanites follows later and is marked, especially in the paralytic form. (Here there is a complete absence of peristalsis.) In thin walled abdomens the peristalsis may be seen and the point of obstruction may be located with a stethoscope by noticing the point where the sounds cease. In localized septic peritonitis there is absence of sounds in affected portions, while they may be heard in the other parts. Fever is absent in all mechanical cases and is typical of all septic cases.

### **Diagnosis.**

For purposes of treatment it is very important to ascertain the cause, if possible. Careful attention to the history will aid in distinguishing between that due to interference with the nerve supply, hepatic or renal colic, and that due to sepsis. A careful examination will locate the point of origin in septic cases if the process has not gone too long,—for example, the right iliac region in appendicitis, etc.

In reflex cases the vomiting ceases in time. In mechanical it grows continually worse. No case should be allowed to go along until fecal vomiting ensues. Finally, by giving enemas, with no passage of flatus or feces, the diagnosis may be made with certainty.

### **Prognosis.**

In many of the paralytic and reflex cases the prognosis is good under medicinal treatment; in mechanical, absolutely bad. About 50 per cent mortal-

\*Read before the Huron County Medical Society, Bad Axe, January 11, 1909.

ity, sometimes as high as 80 per cent, occurs in surgical treatment at the present time. When a prompt diagnosis is made it can be reduced markedly.

### Treatment.

As indicated above, the reflex and paralytic cases may be treated medically, unless the underlying cause requires surgical treatment itself, as twisted pedicles of ovarian tumors, etc. Purges should be withheld until an exact diagnosis can be made, if possible; morphine also should be withheld and used only in preparation for operation. It may be of interest to cite four cases which came under my observation during the past year.

The first was a patient of Dr. Sellars of Pinnebog, Michigan. Mrs. E., a woman of 55 or 60 years of age, married, had been troubled with increasing constipation for a year or more. A short time before I saw her, the obstipation being almost complete she consulted Dr. Munro, who found a new growth, high up. On her return home, becoming still worse, Dr. Sellars was called and confirmed the diagnosis previously given. When I saw her, the condition was still worse. I advised a colostomy for relief of vomiting and pain. On operating I found the growth could be withdrawn from the abdomen and that it involved the lower part of the sigmoid flexure. I, with consent of husband, excised the growth, about  $1\frac{1}{2}$  inches of bowel and an enlarged mesenteric gland, and stitched the ends together. She had rather a stormy time for two or three days, then made a rapid recovery. She has gained many pounds, and states that she is better than she has been for years. It is of interest to note that a plum pit, imbedded in the opening, made the obstruction complete.

Case No. 2. Mr. S., a man of 60 years, whose previous history was negative, except for an attack of appendicitis; during a hard day's work on a land roller, he was taken with agonizing pains in bowels, vomiting, inability to get bowel passage and slight tympanites. His pulse was not very rapid. Temperature was normal. Dr. Sellars promptly made the diagnosis of obstruc-

tion. I confirmed this and operated as soon as he could be prepared. I found the cause to be a band of adhesion involving the appendix and surrounding surface. It completely obstructed the gut. This was removed, together with the appendix. He also made a prompt recovery.

Case No. 3. Mr. J., a man of 55, a patient of Dr. Dawson of Pigeon, Michigan, was taken ill after a hard day's work. The doctor when called made a prompt diagnosis of obstruction from usual symptoms of pain, vomiting, inability to move bowels and collapse. When I saw him a few hours later, all the symptoms were intensified. Immediate operation was advised and accepted, and patient removed to a hospital twenty miles away, by means of an auto. On opening abdomen the intestines were found reddened and a good deal of serum was present. I found a part of ileum bound down by a large band. This was divided and abdomen closed. A prompt recovery followed.

Case No. 4. The next case, Mr. L., was one of my own. I had operated on him for a gangrenous and perforated appendix some months previous. He had recovered completely. After a day's work in the woods, he took a drink of cold water and rode home, three miles through the cold. On his way he was attacked by extreme pain, which he attributed to the cold water. The pain, followed by vomiting, got so violent that I was sent for. I found him with a temperature normal, no tenderness or distension, pulse normal, respiration normal. I could find nothing to account for pain and vomiting; so I gave opiate, advised an enema and was to be called in the morning, if no better. The next day, he seemed easy until evening, when pain and vomiting got worse. I was again called and diagnosed obstruction, as no bowel movement had followed. At the request of his parents, he was left until morning. I then found him no better, brought him to hospital and after two fruitless enemas operated again. I found a band tying down a portion of ileum, which was pretty dark in color. Much serum was present. The band was divided—with another recovery scored.

All four recoveries I consider due to skill shown in diagnosis and to prompt operation. It is instructive to know that three cases were due to bands resulting from old appendicitis, and it offers another argument in favor of prompt operating in cases of the disease.

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JULY

**Editorial**

A LITTLE MORE CONFIDENCE AND RESPECT FOR OURSELVES AND OUR CALLING, A LITTLE MORE TOLERANCE FOR OUR FELLOW-WORKERS, AND A RECOGNITION OF THIS ALL-IMPORTANT FACT, THAT THE PUBLIC WILL TRUST AND RESPECT US ONLY TO THE EXTENT TO WHICH WE TRUST AND RESPECT EACH OTHER—THIS IS THE SECRET OF A NEW ERA OF PROFESSIONAL PROSPERITY.—*American Medicine.*



**Medical Expert Testimony.** It has been said that whenever the Medical Jurisprudence Society of Philadelphia has no material for a program, a symposium on expert testimony is announced, a large audience gathers and a heated debate follows. The evils which are so common in medical testimony, are also as frequent in connection with expert testimony of all forms, whether mechanical, financial, or regarding realty values. It must not, therefore, be assumed that the criticism so often launched at the system, is directed entirely at the medical man.

In every debate on expert testimony, one conclusion is always reached and that conclusion is that medical expert testimony has fallen into disrepute, and has, in very many cases, brought ridicule upon the medical profession. That there is need for reform is believed by all who

have given the matter serious thought; yet, the solution of the difficulty and the cure for the evils have not been readily formulated.

Perhaps the greatest evil is the method of selecting experts. As it is now, very little attention is given in most cases to the real ability of the men who are called to testify. One may read in the evening paper that a certain doctor was called as an expert in a street railway case involving damages for a fractured arm, and in the morning paper that the same doctor gave expert testimony as to the mental condition of the defendant in the latest murder sensation. We are frequently treated to this exhibition of the wonderful many-sidedness of these experts. And the public is wise enough to see the absurdity of it all and to laugh not only at the "experts," but at all the rest of us as well. The fault, however, is not in us, but in the system.

The continental method of appointing experts is an improvement on that in vogue in most of our states. In Europe, the experts are selected by the judges, and it is considered an honor to serve the court in this capacity. The expert, not being a hireling of either the prosecution or the defense, is able to give an unbiased, and therefore a strictly scientific opinion, for no matter how honest a man may be, the psychological influence of a retaining fee will inevitably color opinion, such is human nature. Such a method of selection, however, is not in accord with our democratic principles of government and would probably be a failure, were it to be tried here.

To eliminate this element of bias, as well as to provide men who are really competent, was the object kept in view by those who are responsible for the new statute in New York State. This provides for a special panel of men, nominated for each section of the state, and from the names in these lists the judges select the experts. It will be interesting



to see what the result of this system will be. Many are skeptical, believing that the pernicious influences which sooner or later pervade the appointment of all such bodies of men, will be felt in the selection of these panels of experts.

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**The Michigan law on the subject** is known to but few physicians; at least, we would suppose this to be the case from conversation with a number of the profession throughout the state. The full text of the law in this state is as follows:

**Public Acts, 1905.**

AN ACT to regulate the employment of expert witnesses.

THE PEOPLE OF THE STATE OF MICHIGAN ENACT:

Section 1. No expert witness shall be paid or receive as compensation in any given case, for his services as such, a sum in excess of the ordinary witness fees provided by law, unless the Court before whom such witness is to appear or has appeared awards a larger sum; and any such witness who shall directly or indirectly receive a larger amount than such award, and any person who shall pay such witness a larger sum than such award, shall be guilty of a misdemeanor, and on conviction thereof, shall be punished by a fine not exceeding one thousand dollars, or by imprisonment in the county jail not to exceed one year, or both, in the discretion of the Court, and may further be punished for contempt.

Section 2. No more than three experts shall be allowed to testify on either side as to the same issue in any given case, except in criminal prosecutions for homicide; PROVIDED, the court trying such case may in its discretion permit an additional number of witnesses to testify as experts.

Section 3. In criminal cases for homicide where the issues involve expert knowledge or opinion the Court shall appoint one or more suitable disinterested persons, not exceeding three, to investigate such issues and testify at the trial; and the compensation of such person or persons shall be fixed by the Court and paid by the county where indictment was found, and the fact that such witness or witnesses have been so appointed shall be made known to the jury. This provision shall not preclude either prosecution or

defense from using other expert witnesses at the trial.

Section 4. This act shall not be applicable to witnesses testifying to the established facts or deductions of science, nor to any other specific facts, but only to witnesses testifying to matters of opinion.

Approved June 7, 1905.

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**The first and only endowed laboratory in Detroit** was formally opened on Wednesday, June sixteenth. It is at the Woman's Hospital and Infants' Home and is the gift of Mrs. Grace Whitney Hoff, a Detroit woman who lives for the most part in Paris, and whose charities have become notable both here and abroad. The gift includes not only the expense of equipment but also of maintenance for a term of five years. The laboratory is thoroughly, though modestly, equipped and stands ready for use by those who combine capability, leisure, incentive, and acceptability to the staff. Routine analytical work, such as urinalysis, and clinical bacteriologic and blood examinations, will probably be taken care of by the internes. Other work, requiring especial skill and knowledge, will be in charge of the laboratory staff. Under the name "Grace Whitney Hoff Research Laboratory" there is opportunity offered for original investigative work of any kind, either in connection with the hospital or independent of it.

The profession ought to regard this gift as a favorable sign of public interest in scientific work. Doubtless there are in this city and in other cities, other people of wealth who would willingly contribute to such enterprises, when it is explained to them that the accelerated medical progress of recent years is due to laboratories and their workers. Not that great discoveries proceed from every institution of this kind—far from it. But it is the sum of labor in all places by all men, that marks the real, substantial ad-

ance, and renders the chance of epoch-making discoveries so much the greater.

Whereas two years ago no hospital in Detroit had a laboratory worthy of the name, there are now well-equipped laboratories for clinical diagnosis at Harper, St. Mary's, and the Woman's Hospital, with men of special training on each, who are in turn training others to a higher level of average skill. But the "Grace Whitney Hoff Research Laboratory" is the only one founded by a lay gift, and offering facilities to any one qualified to work.



**Hygiene, Diet and Long Life** is the title of a magazine, the initial number of which has just appeared. It announces that it is to be a popular medical journal, issued monthly, and will have for its object the supplying of a medium through which the medical profession may speak to the laity, "teaching the duty of the public to the physician, as well as the physician to the public." What to eat, how to dress, and how to maintain our dwellings in a hygienic condition—in short, how to prolong life—will be the themes discussed. It will not publish articles on the cure of disease, nor advertisements pertaining to curative substances.

The managing editor is Carl H. von Klein of Chicago, and the editorial staff comprises John A. Wesenger, chief analyst Columbus Medical Laboratory, in charge of the department of "Pure Food"; William L. Baum, professor of infectious diseases in the Chicago Post Graduate, in charge of "Contagious Diseases"; Arthur R. Reynolds, late commissioner of health, Chicago, at the head of the department of "Police Sanitation"; Isaac A. Abt, associate professor of diseases of children at Rush, in charge of "School Hygiene"; Anton Lagorio, director of Chicago Pasteur Institute, Chicago, in charge of "Sanitary Prevention of Rabies."

There is a field for such a journal and we wish it success. Subscription, \$1.00 annually, may be sent to 84 Washington street, Chicago.



**A vote of all the members of the state society** will shortly be taken, by mail, on the question of the establishment of a defense league by the society. The matter was brought up at the last annual meeting, in Manistee, and a committee of five was appointed to consider and submit to the Council a plan for starting and maintaining the work. This committee brought its plan before the Council last January and the latter voted to recommend its adoption to the House of Delegates. Many of the county societies have discussed and voted upon the plan, and all but one voted in favor of its adoption.

The Council ordered the secretary to take a postal card vote of the entire membership previous to the Kalamazoo meeting, in order that the sentiment of a large number of our members might be put into the hands of the House of Delegates.

The plan proposed provides for amendments to the state society by-laws in effect as follows:

(1) An initial assessment of \$1.50 from each member for the year 1910.

(2) One dollar per year after 1910.

(3) A Standing Committee on Medical Defense, consisting of an Executive Board of five and one member from each county society, not otherwise represented. The Executive Board shall be elected for five years; the other members for one year.

(4) The Executive Board and other members of the Committee are all to be elected by the Council.

(5) The Chairman of the Executive Board, also elected by the Council, for one year, is to be the custodian of the Defense Fund and to give bond to the Council. He is also to receive some compensation set by the Council.

(6) The Executive Board will engage, by the year, a competent firm of attorneys. Their duties



shall be to defend any member not in arrears, when sued or threatened with suit for civil malpractice.

(7) Dues must be paid before June 1st, the league not defending any member in a suit the cause of which arose while in arrears.

(8) It is to be especially noted that the league assumes two years' back liability on every member, provided suit has not been threatened or begun before joining the society or before the league is established. It also assumes the defense of any suit brought against the estate of a deceased member.

(9) Any member threatened with suit may recommend a local attorney who will be appointed by the general attorneys to defend the member. In important cases the general attorneys will be present in court.

(10) All attorneys' fees and court costs will be paid from the Defense Fund and carried through all Michigan courts. The fund will not be liable for any damages declared against an unsuccessful litigant.

(11) In the event that during any one year the demands upon the Defense Fund be great enough to exhaust it, the Council is authorized to loan sufficient funds from the treasury of the state society.

In every state where the defense feature has been undertaken as part of the state society work, it has been an unqualified success and has been a potent factor in increasing the membership. It has been tried out and found financially sound. Think of insurance against malpractice suits for \$1.50 per year for the first, and \$1.00 per year thereafter!

Every member is urged to return his vote promptly. It will be mailed about August first.

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## Book Notices

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**Modern Medicine. Its Theory and Practice.** In Original Contributions by American and Foreign Authors. Edited by William Osler, M.D., Regius Professor of Medicine in Oxford University, England; formerly Professor of Medicine in Johns Hopkins University, Baltimore; in the University of Pennsylvania, Philadelphia, and McGill University, Montreal. Assisted by Thomas McCrea, M.D., Associate

Professor of Medicine and Clinical Therapeutics in Johns Hopkins University, Baltimore. In seven octavo volumes of about 900 pages each, illustrated. Volume VI, Diseases of Urinary System, of the Ductless Glands, of Muscles, Diseases of Obscure Causation, Vasomotor and Trophic Disorders, Medical Aspects of Life Insurance. Price per volume: cloth \$6.00 net. Lea & Febiger, Publishers, Philadelphia and New York, 1909.

The sixth volume of Osler's *Modern Medicine* just off press, covers a very wide and important range of subjects, namely, the diseases of urinary system, of the ductless glands, of muscles, those of obscure causation, vasomotor and trophic disorders, and the medical aspects of life insurance. These diseases are all handled by specially competent men. John McCrea of Toronto, begins the volume with two chapters on the kidney, followed by two on urinary anomalies and uraemia by Garrod, of London. Herrick, of Chicago, deals with all aspects of nephritis, as well as amyloid disease, and Thomas R. Brown, of Baltimore, considers pyogenic tubercular affections of the kidney. Its medical and surgical aspects, from the pen of H. H. Youmans, of Baltimore, conclude this section. George Dock, formerly of Ann Arbor, and now of New Orleans, has written the entire section on diseases of the ductless glands. Longcope, of Philadelphia, considers Hodgkin's disease; T. McCrae, of Baltimore, arthritis deformans; Dock, of New Orleans, osteomalacia; and D. J. McCarthy, of Philadelphia, astasia-abasia and adiposis dolorum. Together with W. R. Steiner, of Hartford, McCarthy has written the section on muscular diseases. The editor, Dr. Osler, with his former colleague, C. P. Emerson, of Clifton Springs, handles the section on vasomotor and trophic disorders, and Charles Lyman Greene, of Paul, concludes with the medical aspects of life insurance.

We have found especially interesting the chapters by Dock, on Diseases of the Ductless Glands and that on Hodgkin's Disease by Longcope. They have been well illustrated. Two of the most striking cuts of cretinism are of the cases of Sander published in this journal in April, 1906.

One more volume is to appear, and with it will be completed one of the greatest systems of medicine ever published.

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**Principles and Practice of Physical Diagnosis.** By John C. DaCosta, Jr., M.D., Associate in Clinical Medicine, Jefferson Medical College, Philadelphia. Octavo of 548 pages, 212 illustrations. Philadelphia and London: W. B. Saunders Company, 1908. Cloth, \$3.50.



As a frontispiece, the author has the following quotation from W. W. Kean: "With all our tried instruments of precision, useful as they are, nothing can replace the watchful eye, the alert ear, the tactful finger, and the logical mind which correlates the facts obtained through all the avenues of information and so reaches an accurate diagnosis." To elucidate the methods of physical examination has been the author's aim, space being given to laboratory methods. The field of the book, therefore, is somewhat more restricted than the ordinary one of medical diagnosis.

Particular attention has been given to clinical anatomy and to the origin, mechanism and meaning of normal physical signs, while throughout, emphasis is laid on the interpretation of objective data.

The text everywhere gives evidence of careful preparation and the illustrations are good. The book is to be highly recommended.

**The Practical Medicine Series.** Under the general editorial charge of Gustavus P. Head, M.D. Vol. III, 1909. The Eye, Ear, Nose, and Throat. 365 pages. Chicago, The Year Book Publishers, 1909.

The third volume of this medical review comprises the field of ophthalmology, edited by Wood; otology, edited by Andrews; and laryngology, edited by Head. The leading articles of the year which have appeared in the world's literature are abstracted, correlated, and commented upon by the editors.

While the series is primarily intended for the family physician, it is an advantage that each volume may be purchased separately.

**Thornton's Pocket Medical Formulary.** New (4th) edition. Containing about 2,000 prescriptions, with indications for their use. In one rather-bound volume. Price, \$1.50 net. Lea & Febiger, Publishers, Philadelphia and New York, 1909.

The use of aids of this kind is often discouraged on the ground that they replace individual thought. Nevertheless, there is a certain field for them, for, as the author says, "even the best informed physicians may at times overlook an appropriate drug, and a young physician will perform his duty better, both to his patient and to himself, if he has at hand the collective experience of the profession."

The major portion of the book is made up of selected formulae arranged under diseases. In

addition are tables of doses, incompatibles, weights and measures, poisons, etc. It is attractively bound in blue leather.

**A Text-book of Medical Chemistry and Toxicology.** By James W. Holland, M.D., Professor of Medical Chemistry and Toxicology, Jefferson Medical College, Philadelphia. Second Revised Edition. Octavo of 655 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1908. Cloth \$3.00 net.

The number of students beginning the study of medicine who are thoroughly prepared in chemistry is increasing annually; nevertheless, it will be years before all will have a sufficient foundation upon which to take up physiological chemistry and toxicology. There is, therefore, need of a book which gives the essentials of general chemistry in a practical manner with due emphasis on those phases of the subject which relate to medicine. This book, by Holland, who is an experienced teacher, covers this ground in an admirable manner.

The scope of the work may be judged from the main divisions, which are: (1) Introduction, covering chemical philosophy, in which the principles of matter, force, heat, magnetism, electricity, light, etc., are considered; (2) The Chemical Elements, a brief but excellent summary of the metals and the non-metals; (3) Organic and Physiological Chemistry, in which this most difficult branch of chemistry is clearly set forth; (4) Energy of Foods, giving the chemistry of saliva, gastric contents, pancreatic juice, bile, intestinal juice, blood, milk and wine.

Physiological chemistry occupies a more conspicuous place in medical science today than ever before, and the study of books such as this will well repay the practitioner, as well as the student.

**Progressive Medicine.** A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Vol. XI, No. 2, June, 1909, Octavo, 317 pages, with 52 illustrations. Per annum, in four paper-bound volumes, containing 1,200 pages, \$6.00 net; in cloth, \$9.00, net. Lea & Febiger, Publishers, Philadelphia and New York.

The June issue of *Progressive Medicine* deals with abdominal surgery, gynecology, diseases of the blood, and ophthalmology. The section on hernia, edited by Coley, contains an especially good review of the subject of hernia associated

with undescended testicle. Especially noteworthy are Foote's review of the much-discussed Hirschsprung's disease and of surgery of the pancreas, and Clark's review of recent progress in the cancer problem. Stengel summarizes the progress in diseases of the blood and ductless glands. Especially good is the section on diabetes mellitus. Jackson closes with an epitome of the year's developments in ophthalmology.

### RECENT LEGISLATION.

The following notes on the Optometric Bill and the Nurses' Registration Bill are furnished the *Journal* by Dr. B. D. Harison, Secretary of the Board of Registration in Medicine.

#### OPTOMETRIC BILL.

This bill was passed with amendments suggested, through force of circumstances, by the Legislative Committee of the State Medical Society, and has been signed by the Governor. The committee opposed the bill altogether, even with amendments, upon principle, from the fact that optometry, so-called, is the practice of refraction classed under the subject of Diseases of the Eye. It was, however, unable to defeat the bill, but was successful in practically making it unconstitutional.

In this bill the practice of optometry is defined as follows: "Sec. 7. The practice of optometry is hereby defined to be the employment of any means other than the use of drugs for the measurement of the powers of vision and the determination of the accommodative and refractive states of the eye and the scope of its functions in general, and the adaption of lenses and frames for the aid thereof.

"Sec. 8. It shall be unlawful for any person registered under this act to use, prescribe, give away, sell, offer for sale or have in his possession for the purposes of sale, any eye remedies, lotions, salves or medicines of any kind or description, practice medicine or surgery within the provisions of Act No. 237 of the Public Acts of 1899 or Acts amendatory thereto, or use the prefix Dr. or any title or appellation used in a sense to indicate the practice of medicine."

The so-called practice of optometry defined as above, has been one of the subjects in connection with the eye which has been taught and examined upon in all medical schools, of this and other countries, ever since medical schools have been in existence. The medical acts of

Michigan provide for an examination on the subject of the eye, and provide for such subject being included in its authorized standards. If refraction (optometry) was not included in the curriculum of recognized medical colleges and a proper course on the subject had in such colleges, including an examination, then graduates of such colleges could not obtain a certificate from this board, as the subject is included in the board's standard, which in law it has authority to set and publish. If refraction is not included in the practice of medicine, then the board would have no authority to demand its teaching and course in recognized medical colleges, nor could it be legally required in its examination for license. The board not only emphasizes the teaching of this subject in medical colleges by special circular, but also, in addition to the written examination, has a practical examination upon the correction of defects of the eye by lenses. If, on the other hand, refraction (optometry) is legally the practice of medicine, then in their act referred to, optometrists, so-called, are disqualified by section 8, as above quoted, from practicing under section 7 of said act.

In addition to refraction (optometry) being taught in medical colleges and practiced by physicians throughout the world from time immemorial, there are several Supreme Court decisions which, without question, show that in law refraction (or optometry) is adjudged as really within the practice of medicine. A few examples of these decisions may be referred to.

*Eastman vs. The People*, App. Court, Ill., 1896. This decision states that it is not necessary to give drugs or medicines in order to come within the provisions of the legal term "Practice of Medicine."

One of the more recent decisions, and which goes into the matter very thoroughly, is the Supreme Court of New York, Appellate Division, First Department, in the case of *People vs. Allcutt*. In this decision several other decisions, including Ohio decisions, are referred to and criticised. This New York decision states that the courts of Massachusetts, Maine, Michigan, Iowa, Missouri, Colorado, Nebraska, Illinois, Ohio, Alabama, Indiana, New Mexico, South Dakota and Tennessee refuse to restrict the practice of medicine to the administration of drugs or the use of surgical instruments.

Also, recently the Supreme Court of Massachusetts gave out a like decision, holding that



refraction, or optometry, so-called, came within the legal provisions of the practice of medicine. There are several cases in the Michigan Circuit and Recorder's Courts, i. e., *The People vs. Allen Raymond*, in the Circuit Court for Calhoun County, in which Judge North instructed the jury as follows: "The practice of medicine, as that term is used in the statute under which this action is brought, means the exercise or performance of any act by or through the use of any thing or matter or by things given or applied, whether with or without the use of drugs or medicine, by a person holding himself or herself out as able to cure diseases or the causes of diseases, with a view to relieve, heal, cure, or having for its object the prevention, healing, curing or alleviation of disease." "Disease" in law including ailments and complaints. In several cases before the Recorder's Court in Detroit, exactly the same language as used by Judge North was used in instructing the jury as to the definition of the practice of medicine.

Based upon the fact that we have an Attorney-General's office in this State, and a Governor who has the power to veto, and whose duty it is to veto unconstitutional bills, and as the facts above were known to both departments of the government, the question naturally suggests itself, "What are these departments maintained for?" By experience, it is a well-known fact that unconstitutional bills are as readily passed upon and signed after they pass the legislature as constitutional ones. It seems that obligation to political supporters is held in higher esteem than personal responsibility to duty. The expense to individual citizens and consequent hardships and confusion also involved, and, in addition, the unnecessary expense to the State created by unconstitutional legislation, seems to deserve some consideration from those executives authorized in law to prevent such preventable conditions.

### THE NURSES' BILL.

As passed by the Legislature and signed by Governor Warner, the bill as originally introduced by the authority of the Michigan State Nurses' Association was very materially modified through the efforts of the Legislative Committee of the State Medical Society, of which Regent W. H. Sawyer, of Hillsdale, is chair-

man. The minimum course in the original bill was cut down to two years, in place of three years, and the Association's definition of a nurse, i. e., "A person who is competent to give efficient care to the sick," was changed to "Within the meaning of this Act, a state registered nurse is defined as one who for hire or reward, nurses, attends and ministers to the sick or afflicted under the supervision and direction of a legally registered practitioner." The original bill created a board composed of five nurses. The bill as passed provides for a membership of five, viz., one registered physician, the Secretary of the State Board of Health and three nurses. Section 12 of the bill has already in similar acts been declared unconstitutional by the Supreme Court. This section was practically copied from the 1883 Medical Act, which was amended constitutionally in 1907. At a public hearing of the Health Committee of the House, at which the State Medical Society, the State Medical Board, the International Association of Hospitals and Training Schools, and several county societies were represented, Dr. F. W. Shumway, Secretary of the State Board of Health, was present and assumed the position of representing the nurses, and was accepted by the medical representatives present and the committee. He suggested as a compromise a board whose membership should include three medical men and two nurses. This proposition was not agreed to by the medical men, who held that a nurse properly should be directly under the authority of the medical profession as represented by the Medical Board and could see no material advantage for creating an additional administration, with the additional expense attached thereto, from the fact that it was provided in the substitute bill filed by the State Legislative Committee, that the Secretary or members of the Medical Board should receive no additional compensation for the administration of the Nurses' Act. The House Committee reported out the bill as finally passed, with a board composed of the Secretary of the State Board of Health, a registered medical man and three graduate nurses. Subsequent to the reporting out of this bill, Dr. Shumway repudiated himself as the representative of the nurses at the meeting of the Committee as above referred to. The following statement signed by the late Representative Sheridan J. Colby just prior to his death at Harper Hospital, and witnessed by Dr. H. O. Walker, needs no comment concerning the



methods used in the passage of this bill in the House:

"This is to certify that I was present in the House during the reading of House Bill No. 180, File No. 174, as reported out by the Committee on Public Health, and which passed the House unanimously on April 7, 1909. In the interests of the people I desired to have some changes made in this bill as reported out by the Committee, and consulted with the Chairman of the Public Health Committee, Dr. Huntley, who had charge of the bill, and was informed by him that there was no opposition to it and that the physicians who had been in opposition had withdrawn such opposition. Several other members of the House also desired to offer amendments to said bill, but were informed by Dr. Huntley, that the bill had been agreed to as reported out by the Committee and passed by the House. On account of this statement of Dr. Huntley's no amendments were offered.

"Harper Hospital, Detroit, Mich.,

"April 29, 1909.

"WITNESS: H. O. Walker.

"SHERIDAN J. COLBY."

The Legislative Committee of the State Society was successful in holding the bill in the Health Committee of the Senate, who unanimously refused to report it out, notwithstanding tremendous political influence was brought to bear upon it, favorable to the bill. Just a few minutes before the adjournment of the Legislature, at a time when bills were being passed by the Senate at the rate of one every twenty-three seconds, and when the slightest opposition to any bill in or out of committee meant the "killing" of important bills, through the repeated efforts of the Governor the nurses' bill was taken from the Committee and passed by the Senate. Absolutely no fair opportunity was afforded, or possible, to those in opposition. As the President of the National Association of Nurses and the editor of the National Nurses' Association Journal have frequently emphasized the legislative axioms in regard to state nurses' bills, viz., a board composed of nurses only, a minimum three years' course, and the definition of a nurse, "one who is competent to give efficient care to the sick" (an M. D. qualification), it is problematical if the nurses' bill as passed meets either the requirement or endorsement of the

medical men or of the nurses as a whole. Of course, the "dear people" are responsible for legislative enactments and eventually will be held responsible for the bill.

As nurses are educated, examined and employed by medical men under whose direct authority they are, or should be, the question of the nurses opposing the advice and opinion of the medical men as represented by the state societies of the several schools, could be properly referred to that eminent nautical administrator, William Livingston, President of the Lake Carriers' Association.

The Legislative Committee of the State Medical Society confined its opposition to the proper committees of both houses and absolutely refrained from lobbying in any form whatsoever or using or attempting to use political influence. A "clean sheet" from this standpoint cannot be credited to the nurses, from the facts in evidence.

It should be noted in connection with above statements, that the State Society is not opposed to the principle of state regulation of nurses, it simply contends for a proper act in harmony with the existing medical acts and consistent with the recognized status of nurses, which includes the method of education and training, and the duties and obligations of a reputable graduate nurse.

B. D. HARISON,  
Sec'y State Board of  
Registration in Medicine.

## County Society News

### Benzie.

At the last regular meeting of the Benzie County Medical Society, Dr. J. W. Shanks, of Thompsonville, was elected president; Dr. F. A. Van Sickle, of South Frankfort, vice-president; Dr. E. J. C. Ellis, Benzonia-Beulah, secretary and treasurer. Delegate to the Kalamazoo meeting, Dr. H. J. Kinne, of Frankfort; alternate, Dr. G. O. Edmunds, of Honor.

At the next meeting, which will be held in Hotel Windermere, Beulah, the meeting will be followed by a banquet to which the doctors' wives will be invited.

Benzie County Medical Society is in a flourishing condition and the members have derived much benefit from membership in it.

E. J. C. ELLIS, *Sec'y.*

### Chippewa.

Dr. C. J. Ennis, Councilor of the Twelfth District, was the honored guest of the Chippewa County Medical Society at a banquet held June 1, 1909, in the Park hotel, Sault Ste. Marie. Dr. Ennis will on August 13 celebrate the twenty-sixth anniversary of his career as a practitioner in his home city, and as this meeting was the last before September the society took advantage of the opportunity to honor the veteran member.

The regular meeting preceded the banquet. An interesting paper was read by Dr. C. J. Dickson, entitled "Use and Abuse of Forceps." The meeting was considered by the members to have been the most enjoyable of any since the institution of the society five years ago. At the conclusion of the meeting the members assembled in a group to have their picture taken. They then adjourned to the dining hall, where Host Marriott had prepared a sumptuous feast.

Dr. G. J. Dickinson presided as toastmaster and in a most pleasing manner he called upon nearly all the members present for remarks. At the conclusion Dr. J. J. Griffin presented, in behalf of the society, a beautiful silver loving cup to Dr. Ennis. He spoke of the high esteem in which Dr. Ennis was held by all in Chippewa County and of the delight and honor he felt in presenting the cup. The recipient responded feelingly. He spoke of his coming to the Soo on August 13, 1883. He recalled the size of the town, its growth, and spoke of the different physicians who have come and gone during his residence there. On the cup piece was inscribed the following:

1883	1908
August 13.	August 13.

"Twenty-five years in practice at the Soo. Presented to Dr. C. J. Ennis by the doctors of the Chippewa County Medical Society."

There were present 17 Soo physicians and three from out of town. The visiting doctors were Cameron, of Pickford; Ferguson, of Rudyard, and Gordon, of Brimley. The Soo doctors present were C. J. Ennis, A. MacDonald, R. Bennie, F. Townsend, W. Townsend, J. Rosen-

thal, C. W. Willison, E. H. Webster, R. H. Winslow, I. V. Yale, A. McCandless, J. J. Griffin, J. J. Lyons, G. J. Dickson, F. H. Husband, A. E. Lemon and J. Gostanian.

The society accepted an invitation from Dr. Cameron to hold its next meeting, which will occur in September, at the Munoskong Club.

### Houghton.

The May meeting of the Houghton County Medical Society was held at the Douglas House, Houghton. A committee of physicians was appointed to take a census of the number of cases of tuberculosis in the county.

Dr. W. K. West, of Painesdale, presented a case of cyanosis, in a man aged 22. The first symptoms appeared at the age of 18. There were no subjective symptoms, the patient being steadily employed as an underground mine worker, and consulted a physician only on account of the anxiety of his friends. Physical examination revealed no demonstrable lesion of the heart or lungs, and a blood count showed 6,250,000 red corpuscles, with haemoglobin 100 per cent, plus.

A question was raised as to whether it was a case of—

1. Patulous Foramen Ovale, a condition which shows itself, in most cases, before the second week of life.

2. Polycythaemia, or Osler's disease, in which we have an enlarged spleen (absent in this case) and a great increase of red blood corpuscles, sometimes as high as 12,000,000.

Dr. A. B. Mills, of Calumet, read a paper on "Blood Pressure." He spoke of the value of the sphygmomanometer as a diagnostic and prognostic aid in—

1. In Contracted kidney.

2. In typhoid fever, an acute drop indicating a concealed hemorrhage, and a sudden rise being suggestive of a perforation.

3. As a guide in the administration of an anesthetic.

4. Its value as an aid to the early recognition of persistent high tension due to mental strain, so common in modern political and commercial life. A condition resulting on the one hand in apoplexy, and on the other in Bright's disease.

A Faught and a Riva-Rocci sphygmomanometer were exhibited and their use demonstrated.

Dr. W. E. McNamara, of Freda, read a paper on "Direct Transfusion With Especial Ref-

erence to the Crile Method." The various methods of uniting the severed ends of vessels for the purpose of transfusion may be divided into three classes:

First, by invagination, an example of which is Murphy's method, in which the proximal end of a vessel is invaginated into the distal end by means of three U-shaped sutures.

Second, the end-to-end suture, as in Carrel's method, using three traction sutures of fine silk to approximate the edges of the vessels.

Third, by the use of various mechanical prostheses. Payr, in 1900, used a small cylinder of magnesium, over which the proximal end of the artery was reflected. Over this the distal end was drawn and tied, thus bringing intima to intima, with no narrowing of the stream and with no foreign body exposed to the blood stream.

(a) This idea has been made use of by Crile and others. Crile had some small metal cannulas made, after the manner of Payr's magnesium prosthesis, but with the addition of a small handle by means of which they can be more easily manipulated. With these he perfected a technic by means of which the ordinary practitioner may complete an anastomosis and accomplish a direct transfusion.

(b) Dr. Isaac Levin's transfusion clamp. At the tip of each blade is attached a small cannula with a smooth bore, and having four small pin points at the inner edge of each. An advantage of this clamp is that when a thrombus obstructs the transfusion, the instrument can readily be opened, without destroying the walls of the vessel, the clots removed and the clamp closed again.

Dr. McNamara enumerated some of the conditions in which blood transfusion can be used, described some experiments on dogs which he performed in 1907 and 1908, and gave an account of a typhoid patient on whom he had performed a transfusion by the Crile method. He also exhibited a cut of the Levin clamp, and a set of Crile cannulas.

JOHN McRAE, *Sec'y.*

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### Manistee.

Health Officer Szudrawski's report for the month of May, to the City Council of Manistee, shows that there were 80 cases of measles, three of scarlet fever, one of diphtheria, four of chick-

enpox, three of tuberculosis, and two of pneumonia.

Particular attention is called to the role of house flies in the dissemination of infection. The report says that the closets that are not connected with sewers are principally to blame. Later, when flies are more numerous, every such closet will be a positive menace to public health. There is very little typhoid that cannot be blamed on such conditions, and the public should at once awake to the importance of restricting the freedom of flies to enter homes and prevent flies from access to dangerous places.

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### Oakland.

The regular quarterly meeting of the Oakland County Medical Society was held at Dad's Tavern, in Clarkston, on June 3rd. Dr. J. B. Chapman read a paper on the "Treatment of Rheumatism." Dr. R. Le Barron talked on the subject, "How I Came to Go to the War and Some of the Things Which Came Under my Observation While in the Service." Dr. G. W. Chisholm discussed "Summer Diarrhea in Children."

Supper was served at 6 o'clock at the hotel.

J. T. BIRD, *Sec'y.*

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## News

The Red Cross Hospital of Detroit has been denied any further city cases from the Poor Commission, because, it is said, of unsatisfactory conditions there, rendering the service unworthy.

A new medical position in Wayne County has been created, to take care of all out-of-town cases chargeable to Detroit. The office is the same as county physician, and Dr. Edward Quandt is appointed to it.

The Detroit city physicians for the ensuing year are F. J. Przybylowski, G. F. Lavin, G. F. Voelkner, William Kanter, P. V. Taylor, and Joshua Hansen.

On June 16th the Grace Whitney Hoff Research Laboratory in the Woman's Hospital and Infants' Home, Detroit, was formally opened, with a reception by the hospital board and laboratory staff to physicians and others interested. Addresses were given by Dr. Reuben Peterson,



Ann Arbor, on "Special Hospitals;" Dr. E. A. Christian, Pontiac, on "Hospital Administration and Accounts;" Dr. G. C. Huber, Ann Arbor, on "Laboratories." The speakers were introduced by Dr. W. P. Manton, chief of the attending medical staff. The work of the new laboratory is under the supervision of Dr. Joseph Sill, as consulting bacteriologist; Dr. W. H. Hutchings, as bacteriologist, and Dr. C. S. Oakman, as pathologist.

On June 9th Tuberculosis Blue Star Day was observed in Detroit, when collections were made for the fund used in the war against tuberculosis by the Detroit society. The preparations and actual work of the day profited by last year's experience and nearly \$15,000 was taken in, a substantial increase over the \$11,000 of last June. A full report of the disbursements made from the 1908 fund was published in the newspapers.

The Nebraska College of Medicine has closed its doors through the voluntary action of its faculty, because they believed the college was not maintaining and could not maintain a sufficiently high standard of medical education.

Dr. John W. Bosman, Kalamazoo, has been appointed local surgeon for the Grand Trunk Railroad.

Dr. Clyde C. Slemons has been made city bacteriologist of Grand Rapids.

Dr. H. R. Varney, of Detroit, was elected secretary of the Section on Dermatology at the recent meeting of the A. M. A. in Atlantic City.

At the annual meeting of the Blackwell Medical Society, composed of women physicians, the following officers were elected: Jeanne C. Solis, Ann Arbor, president; Mary G. Haskins, Detroit, vice-president; Anna Odell, Detroit, secretary-treasurer; Lucy J. Utter and Grace M. Clarke, Detroit, councilors.

The Detroit College of Medicine alumni elected the following officers at their annual meeting, May 27: Richard E. Mercer, Detroit, president; Ellsworth Mills, Holly, vice-president; F. Bueser, Detroit, secretary; F. W. Robinson, Sturgis, historian.

St. Mary's Hospital, Detroit, has appointed three new internes from the class of 1909, Detroit College of Medicine—G. D. Briggs, T. J. Brennan, S. F. Haverstock.

The following advertisement appeared in the

Pittsburg papers on Sunday, June 13, 1909:

*PROFESSIONAL FALSIFICATION;  
\$500 REWARD.*

Whereas, Dr. Thomas Alexander MacNichol stated in Atlantic City, Tuesday, June 8th, before the Society for the Study of Alcohol and other Narcotics, that 78 per cent of the 30,000 public school children examined in New York city were habitual drinkers of intoxicating liquors, and 71 per cent of the children whose parents were addicted to drink were sufferers from inherited organic or functional diseases, I hereby offer a reward of five hundred (\$500) dollars for proof substantiating such statement, the same to be paid after approval by three reputable physicians.

GEORGE MULLER,  
416-20 Walnut St., Philadelphia, Pa.

Dr. and Mrs. O. A. Griffin, of Ann Arbor, sailed June 19th from New York for a tour of the European clinics.

On the recommendation of the Medical Board of St. Mary's Hospital, Detroit, the Sisters have established a Department of Obstetrics and are ready to receive a limited number of women in confinement. It is hoped by this means that the nurses of the training school will secure the necessary obstetrical training within the hospital. Certain rooms have been set apart for this purpose. On the recommendation of the Medical Board the Sisters have appointed Dr. C. Hollister Judd and Dr. H. Wellington Yates obstetricians to the hospital.

The following physicians have been licensed in Michigan since March 29th:

Gilbert H. Benton, Cleveland, O.; Cleveland Homeopathic Medical College, 1903. Reciprocity with Ohio.

Alford E. Budde, Norway, Mich.; Northwestern University Medical School, Ill., 1908. Reciprocity with Illinois.

Rosa Englemann, Manistee, Mich.; Northwestern University Woman's Medical College, 1889. Reciprocity with Illinois.

Orange Scott Runnells, Roscommon, Mich.; Cleveland Homeopathic Hospital College, 1871. Reciprocity with Indiana.

Myrtle Belle Hudson, Battle Creek, Mich.; American Medical Missionary College, 1907. Group III.

Bartlett N. Torrey, Detroit, Mich.; St. Louis Medical College, 1874. Reciprocity with Iowa.

Leonardum C. Backus, Ann Arbor, Mich.; Department Medicine and Surgery, University of Michigan, 1887. Reciprocity with Ohio.

Sidney S. Quick, Pittsford, Mich.; Indiana Medical College, Purdue University, 1906. Reciprocity with Indiana.

Oscar B. Lambert, Calumet, Mich.; Northwestern University Medical School, Illinois, 1907. Reciprocity with Illinois.

George Pearn, Jones, Mich.; New York Homeopathic Medical College, 1894. Re-reg. appln. made July 25, 1901; certificate issued June 7, 1909.

George Reinhold Goering, Flint, Mich.; Albany Medical College, New York, 1906. Reciprocity with New York.

Have you collected the fee of fifty cents for each birth registered last year? If not, write to the Secretary of State, Lansing, for blanks. It will be enough to pay all medical society dues and leave a balance.

The following were elected officers of the American Medical Association at Atlantic City: William H. Welch, Baltimore, Md., president; Robert Wilson, Charleston, S. C., first vice-president; Charles J. Kipp, Newark, N. J., second vice-president; Alexander Lambert, New York City, third vice-president; Stanley P. Black, Pasadena, Cal., fourth vice-president; George H. Simmons, Chicago, Ill., general secretary; Frank Billings, Chicago, Ill., treasurer; C. E. Cantrell, Texas (one year, to fill the vacancy caused by death of T. J. Happel); M. L. Harris, Chicago, Ill.; C. A. Daugherty, South Bend, Ind., and William T. Councilman, Boston, Mass., trustees.

Ionia and Montcalm medical societies held a joint picnic at Baldwin Lake, Greenville, Thursday, July 8th.

The "Little Stick," of Detroit, has been carrying out a campaign against advertising quacks. For the week ending June 9th the News published 214 inches of "nasty ads," aggregating \$395.90, "which amount represents the News' income from its partnership with unprincipled doctors, in the business of deceiving its ignorant readers. During the same week, the Free Press carried 196 inches of advertising for the same doctor firms, and enjoyed the pleasure of add-

ing about \$300 to its iniquity account."

Dr. W. E. Rowe, formerly of Allegan, has located in Grand Rapids.

The regents of the University of Minnesota have abolished the College of Homeopathic Medicine and Surgery on account of the small number—only three—who matriculated the past year.

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## Marriages

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Burton G. McGarry, M. D., of Fenton, to Miss Hazel J. Brown, of Howell, June 3.

Robert Cary Jamieson, M. D., to Miss Carolyn Poppleton, both of Detroit, June 16th.

Robert J. Beebe, M. D., to Miss Ida Schulty, both of West Branch, May 19.

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## Deaths

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Charles M. Thompson, M. D., of Elk Rapids, died at his home, May 10, from aneurism of the aorta, aged 44.

Henry B. Clark, M. D., formerly of Mancelona, died at his home in Jackson, May 16, aged 29.

Dr. J. W. Coughlin died in Bay City, April 20, 1909, of Bright's disease. Dr. Coughlin was born near St. Thomas, Ontario, April 10, 1856. His education was received in the common schools of St. Thomas. After graduating from the high school, he entered St. Michael's College at Toronto. In 1875, he entered Trinity Medical College at Toronto, from which and the medical department of the University of Toronto he graduated in 1879. The same year he came to Bay City.

He was an active member of the Bay County Medical Society, having served as president. He was a member of the Michigan State Society and the American Medical Association. In 1883 he was made health officer of Bay City, which office he held for seven or eight years, remaining on the Board in all ten years. He was a member of the United States Pension Board of Ex-

aminers and its president for four years.

Dr. Caughlin was married in 1880 to Miss Frances Wheelan, of Toronto, Canada, who survives him. Four children were born to them. Of this number three are living—one son, John, and two daughters, Misses Gertrude and Frances.

As a man and physician the doctor would take rank anywhere. Studious, sincere and sympathetic, he enjoyed the full confidence of his colleagues and to an unusual extent that of his patients and friends.

The following resolutions were passed by the Bay County Medical Society:

Death has entered our circle. One has been taken who was learned, true and noble—full of devotion to his profession. Grief fills our hearts at his going, made acute by the irreparable bereavement to his wife and children. For these, no labor was too heavy, no pain too great, to break for a moment his consecration to their interest. Therefore,

Resolved, that in the death of Dr. J. W. Caughlin the Bay County Medical Society loses one of its brightest and best members, one ever loyal and faithful, to whom truth and honorable dealing were ever foremost; that the public, especially his clientele, will long feel their loss and find it difficult to fill his place. For many years to these he was not only physician, but comforter and adviser as well.

To his wife and children, in their great bereavement, we tender our sincere sympathy and commend them to the Father of us all "Who doeth all things well."

Resolved, that these resolutions, with a copy of the Memorial, be spread upon the society's records and copy of each endorsed by the President and Secretary be sent the family.

Bay City, Michigan, April 26, 1909.

(Signed) R. W. ERWIN,  
D. F. STONE,  
CHAS. H. BAKER,  
Committee.

W. R. BALLARD, President.  
H. N. BRADLEY, Secretary.

## Correspondence.

To the Editor:

In "Human Life," a magazine of which I never

heard until I received the April copy, there appears a writeup of father, Charlie and I, which is substantially a reproduction of the article published broadcast about two years ago, and about which we wrote a letter to the medical journals at that time. This particular issue is written so fulsomely as to hold us up to derision and has been sent as a marked copy to a large proportion of the regular medical profession in Wisconsin, Minnesota and Iowa. Not only has this marked copy been sent, but a few days after a follow-up letter came, again calling particular attention to this article under the guise of asking for subscriptions.

So far as we can learn it has been sent only to physicians, and evidently maliciously, with a view of injuring our standing with the medical profession, as every practitioner receiving such a copy would take it as a personal insult. Many physicians with whom we are not acquainted might believe that we knew of it or could have prevented it.

The animus lying behind this attack is evidently the same as is trying to secure a change in the management of the Journal and the Association; evidently the idea is to discredit the Association through attacks upon those who have been influential in its management. I was president of the American Medical Association when some of these reform movements were initiated.

Can you tell me whether there has been the same distribution of the "Human Life" magazine in your State? If you can learn anything which will be useful to us in protecting ourselves please let us know.

Yours very truly,

W. J. MAYO.

Editor of State Journal:

Will you kindly publish the Hippocratic Oath and oblige.

Very truly yours,

R. S.

The following is a translation made by Edgar A. Emens, of Syracuse University:

"I swear by Apollo, the physician, by Æsculapius, by Hygeia, by Panacea, and by all the gods and goddesses, calling them to witness that according to my ability and judgment I will in every particular keep this, my oath and covenant: To regard him who teaches this art equally with my parents, to share my substance, and, if he be in need, to relieve his necessities; to regard his



offspring equally with my brethren; and to teach his art if they shall wish to learn it, without fee or stipulation; to impart a knowledge by precept, by lecture, and by every other mode of instruction to my sons, to the sons of my teacher, and to pupils who are bound by stipulation and oath, according to the law of medicine, but no other.

"I will use that regimen which, according to my ability and judgment, shall be for the welfare of the sick, and I will refrain from that which shall be baneful and injurious. If any shall ask of me a drug to produce death, I will not give it, nor will I suggest such counsel. In like manner I will not give to a woman a destructive pessary.

"With purity and holiness will I watch closely my life, and my art. I will not cut a person who is suffering from a stone, but will give way to those who are practitioners in this work. Into whatever houses I shall enter, I will go to aid the sick, abstaining from every voluntary act of injustice and corruption, and from lasciviousness with women or men—free or slaves.

"Whatever in the life of men I shall see or hear, in my practice or without my practice, which should not be made public, this will I hold in silence, believing that such things should not be spoken."

#### Michigan Members at Atlantic City.

Ann Arbor—Drs. C. D. Camp, A. W. Hewlett, N. L. Hoff, C. B. G. de Nancrede, Reuben Peterson, Frank Smithies.

Bad Axe—Dr. W. J. Herrington.

Battle Creek—Drs. B. N. Colver, H. M. Dunlap, C. E. Stewart, L. E. Vandervoort.

Blissfield—Drs. R. M. Eccles, G. H. Lamley.

Detroit—Drs. C. L. Aaron, W. S. Anderson, Max Ballin, Robt. Beattie, J. H. Carstens, W. R. Chittick, James Cleland, Jr., Leartus Connor, Ray Connor, J. E. Davis, Jas. Douglas, Hugo A. Freund, R. W. Gillman, Douglas Gordon, H. J. Hartz, L. J. Hirschman, C. W. Hitchcock, A. D. Holmes, W. H. Hutchings, R. A. Jamieson, E. R. Larned, P. J. Loranger, T. A. McGraw, G. E. McKean, Angus McLean, J. A. McVeigh, J. A. MacMillan, F. J. W. Maguire, W. P. Manton, W. C. Martin, R. E. Mercer, E. C. Miller, S. G. Miner, G. W. Moran, Delos L. Parker, I. L. Polozker, G. E. Potter, F. W. Robbins, R. S. Rowland, B. R. Schenck, B. R. Shurly, E. R. Shurly, H. R. Varney, F. B. Walker, H. O.

Walker, Wadsworth Warren, F. A. Wheeler, H. W. Yates.

Dollar Bay—Dr. E. T. Abrams.

Flint—Drs. C. B. Burr, R. H. Murray, J. W. Orr, H. E. Randall.

Grand Rapids—Drs. A. M. Campbell, S. O. Graves, R. R. Smith.

Ishpeming—Dr. T. A. Felch.

Kalamazoo—Dr. A. W. Crane.

Lake View—Dr. F. R. Blanchard.

Lansing—Drs. G. M. Dunning, Samuel Osborn.

Laurium—Dr. Donald Macqueen.

Milford—Dr. J. C. Black.

Mt. Clemens—Dr. O. C. Fluemer.

Newberry—Dr. F. E. Rutledge.

Owosso—Dr. A. M. Hume.

Painesdale—Dr. W. K. West.

Sturgis—Dr. F. W. Robinson

Tecumseh—Drs. H. P. Conkling, L. G. North.

**The Influence of Quinin on Uterine Contraction.**—Maurer reviews the literature dealing with the clinical and experimental experiences on the subject. His personal experience embraces 78 cases, of which 63 were during labor and 15 cases to hasten abortion. Quinin was found effective in 61 cases (78.270). It appeared of no consequence what preparation of the drug was used, nor did it matter whether subcutaneous or oral administration was employed. Small doses had no effect. It was found necessary to give 15 grains by mouth, and sometimes to repeat this dosage three times within 12 hours; larger doses are not safe. About one-half hour after administration slight labor pains begin, and in  $\frac{3}{4}$ -1 hour the pains become strong and frequent, usually continuing so until after the second stage; if not, more quinin was given. After-effects noted were tinnitus aurium, and, in two cases, headache. The child was not affected. Post-partum febrile reaction was slightly reduced. In the fourteen cases of inevitable abortion the quinin acted well in ten. It is valuable as a remedy because it may make a curettage unnecessary.—*Am. Jour. of Surgery*, from *Deut. med. Woch.*

Dr. William Osler says: "Whether tuberculosis will be finally eradicated is even an open question. It is a foe that is very deeply entrenched in the human race. Very hard it will be to eradicate completely, but when we think of what has been done in one generation, how the mortality in many places has been reduced more than 50%—indeed, in some places 100%—it is a battle of hope, and so long as we are fighting with hope, the victory is in sight."

## Progress of Medical Science

### SURGERY.

Conducted by

C. S. OAKMAN, M. D.

**Traumatic Asphyxia.** The term traumatic asphyxia has been applied to the series of phenomena following the suspension of the respiratory function for a more or less prolonged period by forcible compressure of the thorax or abdomen or both. These consist of the usual symptoms of suffocation, associated with a peculiar mottled bluish discoloration of the skin of the face and neck, sometimes extending to the upper part of the thorax, and occasionally to one or both arms, accompanied by subconjunctival hemorrhages and frequently bleeding from ears, nose and pharynx.

Tardieu, in 1870, made very extensive studies upon this subject, drawing information from the observation of the victims of a panic occurring on the Place de la Concorde, in which thirty persons were injured (with 9 deaths), and those of Prof. Hardy, where a number of women were injured by a stampede from a workshop caused by the falling of a part of a wall, as well as quoting the studies of M. Olliver of Anvers, upon those injured in the Champs de Mars, in the year 1837, of whom 23 died. All those injured presented practically the same symptoms, only varying in degree, consisting of unconsciousness, brief or prolonged respiratory and cardiac depression, sometimes with pulmonary engorgement, which was characterized by a cough and moist rales associated with bloody expectoration, and all, without exception, exhibited a reddish violet or even black, discoloration of the face, neck, in some cases extending up to the upper part of the chest, and occasionally to the arms, possessing the appearance of minute ecchymotic spots, at times so numerous as to be almost confluent. Subconjunctival hemorrhages were common to all and a few bled from the mouth, nose or ears. In none was there delirium, convulsion, or paralysis; a few who were thought to be suffering from apoplexy when first seen, disproved this upon regaining consciousness. The post-mortem findings of 9 cases of Tardieu and at least as many of Olliver (Beek states 16) were uniform, and consist briefly of pulmonary congestion and frequently pulmonary apoplexy. Ecchymosis existed under the serous surfaces of lungs and heart and emphysema from rupture of air vessels. Among the characteristics most common was increased fluidity of the blood, which was dark in color, and its accumulation in the chambers of the heart, especially in those of the right side. Tardieu empha-

sizes the integrity of the brain in the two cases in which he was allowed to open the cranium, and states that Olliver in only a single instance found a considerable bloody exudate on the surface of the cerebral hemispheres. It is of interest to note that Tardieu has known similar symptoms and ecchymotic areas in women following prolonged labor, and in an epileptic, upon whom he made an autopsy.

In this form of suffocating, not only is air prevented from entering the lungs by their inability to expand, but the contents of the thoracic vessels may be forced out, and, in the case of the veins, the current is reversed, overcoming the valves and damming the blood back into the capillaries. If the force acting is sufficiently great, it is conceivable that the capillary vessels should be dilated to a point where paresis would ensue. Beach and Cobb advanced this view, and their microscopic studies seem to be conclusive proof of its correctness. Perth believes the limitation of the discoloration to the face and neck to be due to absence or incompetency of the valves of jugular and facial veins. The fluidity of the blood and its dark color, upon which Tardieu and Olliver lay so much stress, is explained by Draper, who attributes it to the withdrawal of atmospheric oxygen from the blood and thereby lessening its coagulability.

Sub-conjunctival and retinal hemorrhages and hemorrhages from the mucous membrane of the nose and pharynx, may be explained by the lack of support the capillary vessels receive from the surrounding tissue of the corium. This leads to the speculation as to what the condition of the smallest vessels of the brain may be, and whether the slow return of consciousness and the tardy resumption of the mental functions, in some cases, is not directly traceable to a paresis if not rupture of some of the capillary vessels of the cerebrum.

It is, however, well understood that spasms are produced by depriving the respiratory centers of their normal blood supply, as by compression of the great vessels of the neck; or they may be brought about by irritation of these centers, dependent upon an increased carbondioxid content of the blood, thereby lessening the supply of oxygen. The treatment of this condition is directed to the re-establishment of respiratory function, such as artificial respiration, oxygen inhalation, atropine and strychnia, and when the right side of the heart is dilated venesection is indicated.—DUNCAN L. DESPAX, *Annals of Surgery*, June, '09.

## PATHOLOGY AND BACTERIOLOGY.

Conducted by

C. E. SIMPSON, M. D.

**The Detection of B-oxybutyric Acid in the Urine.**—HART describes a method for the detection of B-oxybutyric acid in the urine which is simple and requires no special apparatus. It depends on the following principles: the removal of acetone and diacetic acid by heat, the oxidation of B-oxybutyric acid to acetone by means of hydrogen peroxide, and the detection of acetone in the urine thus treated by Lange's test. His method is as follows:

To 20 c. c. of the suspected urine add 20 c. c. of water and a few drops of acetic acid and boil until the volume is reduced to about 10 c. c. To this residue add water to the original volume, 20 c. c. Put this into two test tubes (B and C) of equal size, 10 c. c. in each test tube. To one of the tubes (C) add one c. c. of peroxide of hydrogen, warm gently for about one minute, do not boil, and then allow the fluid to cool. Add to each test tube one-half of 1 c. c. of glacial acetic acid and a few drops of a freshly prepared watery solution of sodium nitroprussiate and mix. Overlay the solution in each test tube with 2 c. c. of concentrated ammonium hydroxide. Allow these to stand for four or five hours, and at the end of this time compare the two test tubes. At the point of contact between the ammonia and the underlying fluid B will show no ring (or a faint brown ring if much creatinine is present): C, to which hydrogen peroxide was added, will show a purplish red contact ring if B-oxybutyric acid was originally present; if B-oxybutyric acid was not originally present the two test tubes will not differ in appearance. If the two test tubes are now shaken the difference in color will be seen throughout the fluid; this difference being intensified by allowing the tubes to stand for fifteen or twenty minutes after shaking.

The test may be applied to the urine either before or after fermentation; the presence of sugar does not interfere with the reaction. If albumin is present it should be removed by filtration after the urine has been boiled. The method is moderately delicate and will certainly detect B-oxybutyric acid when present to the

extent of .3% and probably less.—*American Journal of Medical Sciences*, 137, p. 869.

**The Effect of Fever in Infectious Disease.**—The MEDICAL RECORD discusses editorially the effect of fever in infectious diseases, remarking the difference of opinion on the subject that exists in the profession. Thus some consider high temperature always harmful, others regard it as a reparative reaction only, and a third-class think it may work both injury and benefit in the same organism. Dr. Rolly's article in the *Münchener Medizinische Wochenschrift* is quoted. Experiments were made with animals kept in over-heated cages for many days. The animals failed to show any changes in the parenchyma of organs that could be compared to the degenerations produced by infectious disease accompanied by fever. High temperature seems to play but a subordinate role in the increase of proteid metabolism that is observed in infectious diseases.

Many investigations have proved that the changes in pulse and respiration in infectious diseases are due to the toxins produced and not to high temperature. Circulating toxins produce vasomotor paralysis with subsequent lowering of blood pressure. Rolly's experiments lead to the conclusion that neither the hemoglobin nor the cellular constituents of the blood are affected by prolonged artificial hyperthermia. So far as reaction to disease is concerned the experiments tended to show that high temperature is favorable to the progress of the disease, for in animals it increased phagocytosis as well as the amount of agglutinins and other protective substances in the blood.

Rolly's final conclusion is that rise in temperature accompanying infectious disease is productive of more benefit than injury to the organism. It simply marks a very intense reaction to injury aimed at the destruction of the infecting agents or the neutralization of their toxins. Clinically, therefore, his views oppose any extreme antipyretic measures, whether medicinal or hydrotherapeutic. He would try to control only very high temperatures or such as are accompanied by marked nervous disturbance.



## NEUROLOGY.

Conducted by

C. W. HITCHCOCK, M. D.

**Amyotonia Congenita.**—This disease is so rare that but one case, by Spiller in 1905, has been reported in this country and, all told, but twenty-seven cases have been recorded. Oppenheim in the paper first describing its clinical findings (which appeared in 1900) thus describes it: "A condition of extreme flaccidity of the muscles associated with an entire loss of deep reflexes, most marked at the time of birth but always showing a tendency to slow and progressive amelioration. There is great weakness but no absolute paralysis of any muscle. The limbs are most affected, the face is almost always exempt. The muscles are small and soft but there is no local muscular wasting. Contractures are prone to occur in the course of time. The faradic excitability in the muscles is lowered and strong faradic stimuli are borne without complaint. No other symptoms indicative of lesion of the nervous system occur."

The case here reported corresponds essentially to the above description, though differing in some respects. We are still in ignorance as to the cause of the disease. But heredity, present in this case, has not been a possible factor in other cases. Infectious disease has been absent in the majority of cases. Injury and evident maternal disease can be eliminated as factors. The author conceives that the conditions here present could be explained by the "prenatal action of the unknown toxin" upon the trophic elements of the nerves themselves causing atony and atrophy of the muscles."

The birth has usually been normal, though many of the children were small and thin. The flaccid condition of joints and muscles was early noted. In some cases, inability to hold the head up was the first noticeable symptom. The abnormal flaccidity of joints has made strange contortions possible. In all cases there were noted diminished response to strong faradic currents and unusual toleration of them. In most of the cases there was loss of the deep reflexes.

The myopathies and amaurotic family idiocy are to be differentiated from amotonia, though in other cases mentality has been good. This case, the child of an alcoholic and syphilitic father, was born "as though dead." Family type of amyotonia is also to be excluded. Spiller's findings present arrested development of muscle fibers, a hyaloid appearance of muscles, some involvement of lymphatics and liver.

This case was four years old, had never sat

up alone nor talked nor fed herself. Child is small, skin soft and clear, palate high-arched, head rather large for body. The muscles are soft, lax, flaccid and show much lack of tone. She cannot lift her head nor hold it up. She can take and enjoy currents ordinarily painful, the pain sense is not lacking.

Knee-jerks are present in certain conditions. Hemoglobin was but 45 per cent, erythrocytes 2,600,000; leucocytes 9,000—a secondary anemia of infantile type. —ORBISON in *Journal of Nervous and Mental Diseases* for April, 1909.

**Motor Ataxia from Emotion.**—S. WEIR MITCHELL cites an interesting and unusual case of a builder, aet. 45, who, though always healthy and strong, had been inclined to be nervous. He had allowed himself little recreation but otherwise his habits were good. His memory had been phenomenal and he showed no mental defect.

About 12 years before, his trouble, of which he had long been conscious, became apparent to others. Careful examination failed to bring out any neurological stigma, but at times he would find himself utterly unable to write plainly in the presence of others who were looking at him. If making his signature, the first letters of his name would be plain and then would follow an abrupt irregularity, the hand flying off across the page. This rarely occurs to him when alone or in the midst of other people who are paying no attention to him, but if he thinks his act is being watched, the ataxia quickly develops.

Prolonged physical effort (carrying a valise) induces a fatigue likely to produce the ataxy but a glass or two of whiskey quickly steadies him. At times he feels he can write or do other fine work steadily but at other times for a half-hour at a time he feels himself utterly incapable of any fine act,—lifting a cup, writing, or drawing, etc.

Self-consciousness intensified is a stigma of many cases of so-called nervousness—and since relating this case, knowledge has come to the author of a number of individuals who are subjects of a like infirmity. He presumes that "with the sense of failing powers comes watchful self-consciousness, so that what is an almost automatic action becomes distinctly impaired by being a product of too attentive volition."—*Journ. of Nerv. and Ment. Dis.*, May, '09.

## ORTHOPEDIC SURGERY.

Conducted by

WILLIAM E. BLODGETT, M. D.

**Suggestions for the Treatment of Lateral Curvature by Braces.**—Lateral curvature is the subject of orthopedic surgery which has been most thoroughly studied and yet is unsolved. Twenty years ago, the treatment consisted in the use of braces, often very complicated and seldom effective, in unreasoned gymnastics, and in the application of plaster-of-Paris jackets put on with the patient in suspension. Reminders of these now superseded practices are still present in the back rooms of our offices, in the medical supply stores, and in the practice of the professional gymnast.

In the last twenty years there has been an unprecedented amount of research on the subject. Lorenz, Albert, Shulthess, Lange, Klapp, Böhm, Wullstein, Lovett and Feiss have been the leaders in this work. Up to the present time the most notable results of this work have been Wullstein's demonstration that structural scoliosis could be experimentally produced in young dogs that were bandaged in a distorted position for a few months; forcible correction, or apparent correction, by plaster jackets, first put on by Wullstein with head traction, running up to two hundred and fifty pounds, and side pressure, recently perfected by Lovett by use of powerful lateral and rotation pressure, in his special horizontal frame, without head traction; and Böhm's recent discovery that many of the cases of structural scoliosis carefully radiographed by him showed congenital anomalies of the vertebrae—so-called numerical variations. Feiss has worked out a logical theory of the mechanics of lateral curvature, thus explaining the proximate causation of lateral curvature, although not considering the remote causes, such as Böhm's theory of numerical variations, and regarding these remote causes important only as rendering the proximate causes active. This work has been reported during the last three years in a series of five papers, and has commanded the respect of all orthopedic surgeons. Since Feiss's mechanical explanation applies to all cases, whatever the remote cause or causes, a plan of treatment based on them would likewise apply to all cases. Such a plan of treatment is the subject of Feiss's paper here to be abstracted.

Feiss's studies of the mechanics of lateral curvature may be summed up as follows:

The important point is that the deforming tendencies are revealed in postures of asymmetry, namely, in lateral bend or twist or in the combined states. Following these attitudes there took place according to our conclusions a great strain in the peripheral skeleton with the reactionary strain (which may or may not be con-

sidered primary) in the central skeleton or column. The chief effect noted was that 'with the diversion of the trunk and the accompanying strain in the peripheral parts, the ribs had to give if the limits of the elasticity was overstepped. This strain not only deformed the ribs, but caused retrogression of the vertebrae to which they were attached. The thorax having become deformed after this fashion, there had to be a new balancing of parts around the line of support on account of the difference in weight on the two sides of the thorax; consequently, the vertebrae would be drawn out of their normal line and rendered into a lateral curve, although even before this took place the central primary strain in the column in the deformation attitude might in itself make a permanent curve in that column. These were the chief practical points in the theory. One significant point about these postural strains was that although the formula of change for lateral bend and for twist was somewhat different, the effect was nevertheless the same; and this from the point of view of treatment is of considerable importance, as will be seen.

Feiss's plan for treatment is to maintain by a brace the reverse of the pure deformation of the spine, that is the reverse of the position of the spine in which it most resembles the normal spine in corresponding position. This position of pure deformation is the position which the patient would assume if he had not unconsciously adjusted himself to the deforming posture by secondary deformities to relieve and conceal the primary deformity. Thus the ordinary right dorsal convex curve would bring irresistible strain on the body when in upright equilibrium unless compensated by left lumbar convex curve. The position of pure deformation therefore in this ordinary case would be a long simple right convex curve, similar to left lateral bending in the normal. The position artificially to be maintained for treatment would be a long simple left convex curve. The brace used by Feiss to accomplish this is simple, light, and free from many of the objections to a jacket.

It is noteworthy that this principle of treatment aims to be curative, and not simply corrective. Indeed the position produced by the brace is no immediate improvement, but by reversing the mechanical stress, tends to fundamental, self sustained straightening, both of the rotary as well as the lateral deformity. This principle of treatment therefore marks an advance toward the specific and away from the symptomatic.—*American Jour. Orthopedic Surg.*, Feb., '09, VI, 3, p. 391.

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## Original Articles

### SURGERY IN THE TREATMENT OF THE HYPERTROPHIC AND NEW GROWTHS OF THE FACE.

ANDREW P. BIDDLE, M. D.,

Member of the American Dermatological Association.

Detroit.

Almost every line of work in medical practice includes, if not the performance of surgery in a greater or less degree, at least consultation as to the propriety of surgical interference; and even the views of one whose experience and observations are limited by the class of patients with whom he is surrounded may be of value to you, who must eliminate the wheat from the chaff, to apply the wheat to nourish your broader field of medical practice.

In our work (and by the use of the plural pronoun I refer to those of us whose work is limited as already stated) one of the points of view in the selection of the character of the surgical interference which must always be held in prominence is the cosmetic effect of the operation; though it is not for an instant to be inferred that in dealing with malignant growths other factors, such as the danger of recurrence, are not taken into consideration; that the safety of a more radical operation is sacrificed to cosmetism. In every case, and every case must here, as elsewhere, be judged

upon its own merits, the operation of choice is the one offering the best result, all things considered.

The hypertrophic and new growths of the skin may be considered for the purpose of this paper, either *benign*, by which we mean that those of this type will not recur, if removed; *semi-malignant*, of a type in which there is a danger of recurrence; or *malignant*, of a type in which there must be no interference or in which the removal must be thorough. A few of each of these types will be taken as illustrations.

Of the *benign* hypertrophic and new growths we may consider hypertrichosis, the majority of the warts and naevi, the smaller angiomas and cicatrices, the fibromata, the milia (though this latter is a disease of the sebaceous glands) and xanthoma.

The *semi-malignant*, types of keratosis senilis, with which we may include the so-called seborrheic or senile wart; some forms of pigmentary naevi; some of the epitheliomata; the keloidal growths and the various tubercloses of the skin.

Of the *malignant* type, of certainty the

\*Read before the Eleventh Councilor District Meeting, Big Rapids, May 4, 1909.



sarcoma and some of the epitheliomata; certain types of keratosis senilis, of warts and naevi, resulting in pigmented carcinoma and sarcoma; and often upon a tubercular lesion an intercurrent epithelioma.

Owing to the limited time at our disposal, no attempt will be made to describe the anatomic and pathologic appearances of these hypertrophic and new growths; nor it is necessary to do more than to state that thorough asepsis in regard to all surgical procedures must be carried out. Where a solution of cocaine is used, it is 4% to 6%; where adrenalin chloride is used to check the hemorrhage it is a 1:1000 solution; where a subcutaneous injection is given to anesthetize the skin it is a 1% to 2% sol. of Beta eucaine, with a small quantity of sodium chloride in distilled water. Where electrolysis is applied it is with a fine flexible needle for hypertrichosis and a firm golden one for the heavier work, with a current of 2 millamperes and a voltage of 120. Where the X-rays are referred to, they are those generated by a coil with a tube of requisite hardness or softness. The acids and pastes will be described as their use is indicated.

*Hypertrichosis.*—If in not too great abundance the hairs from the female face can with perfect safety, with little scarring and with little chance of return be removed by electrolysis. It requires some experience, much patience and much perseverance. All other methods of removal are either harmful or useless. Epilation and the removal by depilatories are useless, the hairs always returning and usually with increased vigor. The use of the Roentgen rays for the purpose should be absolutely condemned, except in an unusual condition. Their use is too dangerous, is liable to produce a severe dermatitis and to result in scarring, atrophy of the skin and permanent telangiectic dilatation of the superficial vessels.

In the treatment of these cases it is always advisable to inform the patient that a certain percentage of the hairs will return in spite of every precaution and skill; that the lanugo and the finer hairs become coarser with age; so that the operations must be repeated at definite periods.

*Warts.*—Cutaneous excrescences, are familiar to you all. They appear at all periods of life and are of a variety of form, small and large, sessile and pedunculated, flat and pointed or filiform, single and discrete, multiple and confluent and sometimes in great abundance, of many shades other than the normal color of the skin; sometimes soft, sometimes dense and often even corneous. Of no less uncertain character as to development, they come slowly or rapidly, often persisting for years and curiously enough not infrequently disappearing within a few days or even hours without apparent cause. They may appear on any part of the body, but select the hands and feet, the neck and face and the genitals by preference.

The finding of a variety of bacteria, especially of the gonococcus, and the spirochete pallida in mass in the so-called venereal warts, gives to this class a distinct pathology and suggests that many of the other warts which sometimes abound, especially in children on the hands and feet, may be of an infectious nature. The seborrhoeic, or senile wart, is probably of an entirely different pathologic character, due to changes of nutrition incident to advanced life, and will be considered separately.

The common wart and the flat wart can best be removed by first freezing the same with ethyl chloride and then removing it with properly selected scissors; a further precaution against a return being exercised by cauterizing the base with some acid, as the acid nitrate of mercury, chromic, nitric or trichloroacetic acid, or caustic potash. Another method

is by electrolysis: the electrolization need not go on to complete destruction, for usually merely transfixing the wart with the needle is sufficient. After either process there may be a return.

The filiform wart can be snipped off with scissors and the base properly electrolyzed or cauterized.

As far as my observation goes, I can see no objection to the removal of warts; except interference with the so-called senile wart, which will be taken up later.

The *telangiectasis* and the smaller *nævus vascularis* and the more simple and smaller *angioma* and smaller *cicatrix* can be with safety and preferably removed by electrolysis; the smaller fibromata in the usual surgical way and with the milia, found sometimes in abundance on the face, the sac needs to be opened, the contents scooped out and the sac of each milium touched with an acid. The larger cicatrices call for no unusual surgical procedure. I doubt very much the claims made that smallpox pits are benefited by pushing the use of the X-rays to the point of obtaining a moderate reaction. The form of *xanthoma* which is particularly objectionable is that found on the eyelids. By repeated subjection to electrolysis the growth may be lessened though usually not entirely removed.

The *mole*, a pigmented *nævus*, which may be congenital, or appear soon after birth, but which usually appears during childhood, attaining its maximum of growth by the time of puberty, is often simply a deposit of pigment in the skin, or there may be alterations of other elements of the skin to constitute a rough and warty surface, and it may contain one or many hairs. The pigmented form is found most frequently on the face, neck and back. If not of too large size, they may be safely removed without much scarring or blemish, either by electrolysis or an acid, the acid nitrate

of mercury or the chromic acid. As they are usually removed for cosmetic purposes only, care must be taken that no greater disfigurement occur than the growth itself. To avoid this, when they are removed by electrolysis, it should be done little by little, and at an interval of some days. Some apprehension is often felt as to the danger of removing moles and the removal of hairs from moles. In my experience they can be safely removed in selected cases, the exception being the darkly pigmented mole, which on account of the tendency to the development into a malignant growth is better left untouched.

In dealing with growths of the *semi-malignant type* much judgment must be exercised. As one advances in years, there is frequently developed on one's face and on other parts of the body, especially the back of the forearm and hands, hypertrophic patches, freckle-like lesions, brown or yellowish-brown in color, pea-sized or larger, covered with greasy scales, sometimes slightly elevated and covered with a thick, horny, re-forming layer; the so-called *sebhoric* or *senile wart*. These patches, especially if deeply pigmented and subject to irritation, degenerate into *epitheliomata*. The older the person and the more deeply pigmented the lesion the less the interference must be. If they are of a decided pigment, they should be left absolutely alone; as removal is frequently followed by a return of the most malignant sarcoma. Unless for a thorough destruction the use of caustics and irritants is to be deprecated. Excellent work in these conditions, where removal is advisable, can be done by electrolysis and they will frequently disappear under the influence of the X rays. Recently the carbon dioxide snow has been tried with success.

As stated, most forms of moles may be safely removed without injury; but the same care must be exercised here as

with the warty growths; the deeply pigmented moles are better left untouched.

To my mind it is exceedingly questionable whether it is best, as suggested by Keen, to remove all pigmentary nævi because fatal malignant melanomatous growths so often develop even from the smallest pigmentary spot; for it is often this very interference which excites malignancy. In my opinion they should be left untouched until the first signs of degeneracy appear, when the extirpation should be extensive and complete.

The *keloidal* growths of larger size can be removed in the ordinary surgical manner; the smaller growths by electrolysis and carbon dioxide snow. But the manner of removal gives no guarantee of the future; they almost invariably return; and so in my opinion are best left untreated.

Passing over the various *tuberculous lesions* of the skin, which are not common enough in Michigan to warrant our attention this afternoon, we go to the consideration of the epitheliomas in their *semi-malignant and malignant* forms. The types of *keratosis senilis*, of warts and nævi resulting in pigmented carcinoma, have already been considered. But it is the epitheliomas that I wish in particular to dwell upon. For these we are often consulted; firstly, to determine the character of the lesion; secondly, to advise as to operative procedure.

As the *epithelioma* is presented to us clinically, it varies with its stage, its situation and its anatomical peculiarities; being superficial, deep-seated and papillary; and, as I have observed it, varying greatly in regard to malignancy. Especially is this true in regard to the superficial type known as the "rodent ulcer," which is often of extremely slow growth and with no involvement of the neighboring glands.

The *deep-seated epithelioma* does develop from the superficial form, but more frequently begins in the deeper

tissues and is very hard to the touch and becomes in time firmly adherent. Its course is more rapid, it is painful and the lymphatics are involved, and it selects by preference the lower lip and tongue.

In either of these the *papillæ* may become greatly hypertrophied, so as to mark the character of the growth and to give it its title of *papillary epithelioma*.

*Cutaneous cancers* of the face are of great importance, as they constitute a large percentage of all cases of cancer. The nose, the eyelids, cheeks, temples and forehead are most frequently affected, the chin and ears the least. They are especially common from the fortieth to the seventieth year, and may develop from pre-existing warts, cutaneous horns, adenomata, dermoid or atheromatous cysts, as well as from diseases which cause chronic irritation of the skin, as senile seborrhœa.

Cancer of the upper lip is very rare; the lower lip, however, is the seat of more than 45% of all cancers of the face, the number attacking the male sex very largely predominating.

The great amount of work which is being done to determine the cause of cancer has strengthened the belief that skin cancer, especially at its beginning, is local; that its curative treatment is wholly local and consists in the destruction of all the cancerous tissue; that the earlier this is done the more likelihood of the destruction of all of the same.

All surgeons by education and training, and probably experience, rely upon the knife for the ablation of this morbid tissue; but there are many circumstances which at times make the use of other methods necessary, if not more suitable. Removal by knife has the advantage of exactness, of simplicity and of being less painful than other methods; the disadvantage that it is impossible to determine with precision the extent of tissue to be removed, so that recurrence is



more likely; that the touch of the surgeon cannot have the selective action which it is believed some of the pastes, as the arsenical, enjoy—of destroying the cancerous tissue without permanent injury to the normal parts; and that sometimes the deformity resulting is even more pronounced. Yet I believe the removal of an epithelioma by the knife is the operation of choice, and is imperative where the growth is contiguous to the mucous membrane or the mucous membrane is involved. In the cases to which we refer the operation may be done under Beta eucaine anesthetization. But where the knife is refused or contraindicated, other methods may be chosen with confidence of success, namely the curette (as an aid in the removal of the softer and necrotic portions of the growth, prior to the use of the caustics), the pastes, the galvano-cautery, the Roentgen rays, the Finsen light, radium, and carbonic dioxide snow.

Destruction by *cauterization* has been long in vogue in the treatment of cancers. For the destruction of the smaller growths we use chromic acid, the acid nitrate of mercury, and the chloride of zinc, and for the larger growths the caustic potash; and even in spite of the pain produced many patients prefer their use to that of the knife. There is some absorption of the acid, so that the area of action is not limited by the extent of the application; yet on the other hand there is frequently not the necessity for the loss of as much tissue.

The *paste*, which may be used for the epitheliomata of the cheek not continuous with the mucous membrane of the nose and lips and not too near the eye, is best made by rubbing up a little arsenious acid with an equal part of acacia and adding enough water to make a soft mass. It is spread on a piece of gauze a little larger than the exposed area of the tumor and held in position

by means of strips of adhesive plaster. The pain is undoubtedly severe as is sometimes the swelling; but the paste must be left on for 18 to 24 hours, and sometimes even a fresh paste reapplied. It may be bad surgery to apply a poultice, but it is customary here to do so for some days until the eschar is removed.

Instead of the arsenious acid the chloride of zinc is used in a paste; but its action is more severe than the former. In the stick form the zinc may be suitably used for cauterizing an epithelioma at the inner canthus or the lids, as its action is easily controlled.

For the smaller growths of the face, for instance near the eyelid, the galvano-cautery may be used with a certain class of patients.

It is not the place here to go into the methods of using the Roentgen rays, but to fix their place in the treatment of cutaneous cancers. For the removal of the smaller growths, I believe the other methods of treatment already described are preferable; but in the treatment of selected cases of the so-called rodent ulcer they have given results that are ideal, the cures approximating as high as 90%. They have the further advantage that the scar remaining is much less disfiguring than the scar resulting from any of the other methods; that there is less retraction and deformity; that there is no pain in connection with the operation and no need of loss of time from business. The disadvantages are to my mind the length of time necessary for the treatment, with the uncertainty of the outcome, the ever present danger from the use of the rays, and the danger of losing valuable time in cancers which must eventually be submitted to the knife. And, furthermore, the more the mucous membrane is involved in the cancerous degeneration the less efficacious are the rays and the more serious is the delay of more radical interference.

The *Finsen light* and *radium* are too expensive both in apparatus and in duration of treatment to compete with the other methods over which they do not show superiority of result.

Within the last two years *carbonic dioxide snow* has been employed in the treatment for the removal of many of the growths considered and owes its therapeutic adaptability to its chief physical property, intense cold—90°C. being its freezing point at atmospheric pressure. Its operation is much more easily demonstrated than described, so that I shall not dwell further upon it here, but shall show how the snow is generated.

The *malignant melanomas* (melano-sarcoma, melano-endothelioma and rarely melano-carcinoma) often arise from benign melanomas, especially the flat pigmentary nævi and from continuously

irritated warts. The malignancy of these tumors is shown by the early appearance of metastatic growths in the neighboring glands and the rapid formation of deposits in other portions of the body. The same is true of the soft, easily bleeding angio-sarcoma of the face. These tumors should be left untouched, except perhaps in the selected cases, when their removal must be thorough.

I believe I have shown my faith in and respect for the knife in the treatment of the hypertrophic and new growths of the skin; yet I have endeavored in this brief manner to place before you for consideration other methods not less successful and often better adapted to the wishes and the physical condition of the patient.

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**The Treatment of Specific Urethritis (Gonorrhea) in the Male.**—HAYDEN of New York considers the treatment of urethral gonorrhea in the male, dividing it into four stages; the serous stage, when it may be aborted; acute suppuration, the gonococci having penetrated the epithelial cell layer and entered the circulation; the stage of decline; and the chronic stage. If the microscope shows only desquamated epithelial cells and free gonococci, abortive treatment may be used, since the germs are still in a position in which they may be easily reached by treatment. This is given by irrigating with sterile water and then distending the urethra with a 10 per cent solution of silver nitrate. If the treatment is successful the discharge is soon over. If the acute stage has been reached the utmost quiet is important, since by exercise the severity of the attack is increased. Sexual excitement, alcohol, and high feeding must all be forbidden. Plenty of plain water and citrate of potash should be used. The penis should be so dressed as to facilitate drainage and local pain allayed by warm lead water and sitz

baths. In the third stage, non-irritating hand injections and blenorrhagics may be used, and sandal wood oil taken internally. Warm, soothing irrigations, followed by weak solutions of silver nitrate, are now of value. If the deep urethra is involved local treatment of the urethra is stopped and alkaline mixtures are used, with uva ursi or triticum repens. Hot applications over the bladder and perineum give relief. When the acute symptoms subside, injections of the fluids used for anterior gonorrhea are used very carefully with a hand syringe. In the chronic stage prostatic massage, sounds, and the endoscope may be used, with instillation of silver nitrate solutions.—*Medical Record*, July 17, 1909.

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For wounds that are septic or have an offensive discharge, Mullen advises dropping twenty drops of 40 per cent solution of formaldehyde on the dressing three times a day. The effect on the wound is excellent, the dressing does not require such frequent renewal, and the odor of the discharges is eliminated.—*Medical Recorder*.

## BACTERIOLOGY AND ITS RELATION TO PUBLIC HEALTH\*

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Life is divided into two great kingdoms, animal and plant. Plant life is then further divided into

1. Phanerogams, or flowering plants, and
2. Cryptogams, or flowerless plants.

Cryptogams are divided into—

1. Acrogens, or stem-forming, and
2. Thallophytes, or leaf-forming.

Thallophytes are further divided into three classes, viz.—

1. Algae.
2. Lichens.
3. Fungi.

Fungi are divided into four orders which contain the microörganisms that play such an important rôle in the causation of infection, fermentation, and putrefaction. They are—

1. Schizomycetes—fission fungi or bacteria.
2. Hyphomycetes—thread fungi or moulds.
3. Blastomycetes—budding fungi or yeasts.
4. Myxomycetes—slime fungi or protozoa.

The latter being properly animal parasites.

Of these, the bacteria or fission fungi are by far the most important. They are the lowest members of the vegetable kingdom and are morphologically divided into three families —

- a. Cocci.    b. Bacilli.    c. Spirilla

Bacteria abound everywhere. They are contained in the food we eat, the water we drink and the air we breathe. The surface soil may yield anywhere

from 10,000 to 5,000,000 bacteria per Gm., and polluted soil 100,000,000 or more. As we go down below a depth of two feet, the number of bacteria becomes less, and at a depth of five to six feet we find only anaerobes. At a depth of ten feet and in the ground water region, bacteria are scarce or absent. This is held to be largely due to the porosity of the soil acting as a filtering medium. But whatever the cause, it will be readily understood that this fact is of great value in deciding upon the potability of a water from the standpoint of numerical bacterial contents.

I have been often asked: "What is the use of these bacteria anyway?" That question always makes me feel something like the mother who was asked by her child, "Why is a hen?" Bacteria are scavengers of nature. They convert organic matter into inorganic and prepare it for assimilation by the higher orders of plants. Some of them effect nitrification, others, denitrification. Some have been unquestionably proven, when associated with Leguminosious plants, to be able to fix the nitrogen of the air. Many of the odors and flavors of nature are due to the products of bacteria. Some of these are agreeable; others, offensive. Commercially, bacterial action is utilized in the ripening and flavoring of butter and cheese, the production of alcohol, the formation of acetic acid and vinegar, the rising of bread, the preparation of kumys, etc. These processes are familiar to all. More complex is the utilization of bacterial action in the maceration industries; as the manufacture of linen, the preparation of jute and

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\*Read before the Ingham County Medical Society, October 1, 1908.



hemph, the clearing of sponges, the un-hairing of hides for leather, the preparation of indigo, etc., etc. But we must not forget that important sanitary application of bacterial action in the destruction and purification of garbage and sewage. In the septic tank, not only are the organic solids liquified and broken down into their component elements, but the antibiotic properties of the acting bacteria are almost surely fatal to any specific pathogens which may be present.

Whether bacterial action is absolutely essential to life, has not been satisfactorily settled. Guinea pigs have been aseptically delivered and kept in sterile air and fed on sterile food; thus kept sterile for months and thrived. Other experimenters have tried the same with young chickens and have been unable to sustain life for any length of time. Whether or not they are essential, we know that bacteria are normally present in large number on the surface of the body and throughout the entire alimentary tract. Some of them may be beneficial, either by virtue of their antibiotic action on other bacteria, or as aids to digestion. Some of them are apparently harmless some of the time, and at other times appear to take on increased activity, invade the tissues and become injurious. Again there are other organisms whose presence in the body is almost constantly associated with disease. Organisms which, by virtue of their presence in the body or by the action of their metabolic products upon any of the bodily tissue, or both, are capable of producing changes injurious to health, are known as pathogenic.

The first specific contribution to the bacteriology of disease is probably the demonstration of *Bacillus Anthracis*, by Pollender and Davaine in 1849-'50. This organism was first cultivated by Davaine in 1863. Next is the discovery of the spirillum of relapsing fever, by Ober-

meier in 1873. The *Bacillus Leprae* was discovered by Hansen in 1879. Then follow in rapid succession the work of Neisser, Koch, Löffler, Eberth, Friedlander, Rosenbach, Klebs, Nicholai, Weichselbaum and Ducrey. At this time a new era was inaugurated in bacteriology, when in 1890 Behring explained to the world the principles of "blood serum therapy." Very few specific organisms have been added to our list since that date, most of the work apparently having been directed toward the discovery of specific treatment.

In order to prove the specific nature of a disease, the laws of Koch may be briefly summarized as follows:

1. A specific microörganism must be constantly associated with the disease.
2. It must be isolated and studied apart from the disease.
3. When the isolated organism is introduced into healthy animals it must produce the disease; and in animals in which the disease has been experimentally produced, the organisms must be found under the original conditions.

These rules are easily understood, but in attempting to carry them out with the organisms of the various diseases, we soon meet with difficulty. Some organisms can only be cultivated on special media and under special conditions; others cannot be cultivated by any known method. Some organisms can be injected into certain animals without any apparent harm; in other animals they may produce death. They may produce death in a given animal species under certain conditions, and under other conditions be ineffective.

This brings us to "the factors influencing susceptibility" and "the cardinal conditions of infection."

Infection can take place only when the microörganisms are sufficiently virulent, when they enter in sufficient number, when they enter by appropriate avenues, and when the host is susceptible to

their action.

*Virulence* may be defined as the disease-producing power of micro-organisms.

*Resistance* is the defensive power of the host against bacterial invasion, or the neutralizing power for bacterial toxins.

To such organisms of a pathogenic nature which are normally present in the alimentary tract, there is a normal balance between virulence and resistance. The sudden introduction of more virulent organisms from extraneous sources or any factor which will tend to increase the virulence of the organisms already present, may give rise to infection. Likewise any factor which will tend to lower the resistance of the host may result in infection, even though no foreign organism has been introduced. These facts are most often exemplified by the various cocci of the nasopharynx and the *B. Coli* of the intestinal canal.

Virulence is affected by—

*Cultivation*—Artificial cultivation usually reduces virulence.

*Temperature*—All bacteria have their optimum temperature and if long exposed to temperatures unfavorable to their growth, their virulence is reduced. Bacteria pathogenic to man will usually be non-pathogenic to colder-blooded animals.

*Light*—reduces bacterial virulence.

*Associated Organisms*—may have symbiotic action; as for instance the presence of certain aerobes will materially increase the virulence of tetanus, or the action may be antibiotic and lead to the ultimate destruction of the organism.

*Host*—The virulence is decreased by passage through unsuitable host. As the passage of the variola organism through the cow, or swine crysipelas through a rabbit, etc.

*Resistance*—is influenced by many variable factors, as

Race,  
Sex,  
Age,  
Climate,  
Mode of Living,  
Air and food, etc.

Most important in reducing resistance or increasing susceptibility is the *lack* of an abundance of pure, fresh air. Fresh, outdoor air is the most important factor in the treatment of disease and it is equally efficient in preventing it. Other factors usually mentioned as capable of reducing resistance are:

- a. Inhalation of noxious vapors.
- b. Fatigue.
- c. Exposure to cold.
- d. Indiscretions of diet.
- e. Intoxication, etc.

*Anaphylaxis* is an unusual or exaggerated susceptibility of the organism to foreign substances. It is specific in nature and may be congenital or acquired. The condition may be brought about by the introduction of any strange protein into the body. Hypersusceptibility to proteins that are ordinarily non-poisonous may be induced in certain animals, often even by feeding through the stomach. The reactions of mallein in glands and tuberculin in tuberculosis are well-known instances of anaphylaxis. This condition is of interest to us because it offers an explanation to some of the cases of sudden death or serum disease following the administration of various antitoxines. It may also throw light upon some of the interesting and obscure cases in which the eating of fish, sea food and other articles of diet habitually cause sudden and sometimes serious symptoms.

The reverse of anaphylaxis is *prophylaxis*, and it is here the duties of every conscientious physician begin in every

infectious disease, and his last thoughts when discharging his patient should be of protection to the public and his fellow man. Every physician is a sanitarian and it is his duty as an honorable practitioner of an honorable profession to contribute as much as possible, as often as opportunities are presented, to the cause of "Public Health and Sanitation."

Here we strive for two great principles—

- 1st. Increase individual resistance.
- 2nd. Reduce exposure to infection.

The people should be taught to breathe, to value pure, fresh air, to open their windows to sunshine and to light. They should be taught the rules of hygienic living by their physician, who understands and can teach these subjects as no lay teacher can.

*Immunity* is the ability to resist infection. This ability is largely relative and may be natural or acquired. Carl Fränkel has well explained the relative nature of immunity when he says, "A white rat is immune against anthrax in doses sufficiently large to kill a rabbit, but not necessarily against a dose sufficiently large to kill an elephant."

*Natural immunity* is the inherited resistance against infection or intoxication peculiar to certain animal species and common to all the individuals of that species, for example:

- Rats are immune to anthrax.
- Weasels are immune to tuberculosis.
- Man is immune to hog cholera.

*Acquired immunity* is resistance against infection or intoxication possessed by certain individuals of a naturally susceptible species in consequence of conditions peculiar to them as individuals. Acquired immunity may be active or passive.

*Active immunity* is a resistance produced by substances formed within the

body. This is the type of immunity which results from—

1. Accidental infection.
2. Experimental infection.
3. Vaccination.

Such immunity may be of very short duration, as diphtheria or pneumonia; or it may persist for many years, as smallpox, measles, etc.

*Passive immunity* is a result of the artificial introduction of the defensive factors into the body. Passive immunity is largely the basis of our serum therapeutics and the principle is simple. If an animal with acquired active immunity generates factors by which the infecting bacteria can be destroyed or their toxins neutralized, why not remove these factors from that animal and utilize them in preventing and curing infections in another? By the use of these factors, we have at least been able to successfully antagonize diphtheria, prevent tetanus, and this field now promises fair reduction to the mortality of epidemic cerebro-spinal meningitis.

How are we going to reduce the exposure to infection?

1st. Destroy the eliminated organisms. Bacteriology has, wherever the specific cause is known, shown where to direct our energies. Where all organisms cannot be effectively destroyed as soon as eliminated;

2nd. Quarantine during the attack and sufficiently long after recovery from the disease to insure public safety.

3rd. Disinfect the premises after the attack, before the quarantine is removed.

A few practical hints on disinfection may not be amiss. See that the openings to your room are carefully closed and sealed. Use formalin, which is a solution of formaldehyde in water containing from 37-40% of the gas. See that your room is warm. If the temperature is less than 70°, much of the formaldehyde will polymerize and be



ineffective. The atmosphere should be moist, as the efficiency of formalin is increased by moisture. Use at least eight ounces of formalin for every thousand cubic feet and keep the room closed for 6 to 8 hours after liberation. The formalin is best distributed by spraying on sheets or liberation with permanganate. Both of these methods furnish an abundance of moisture, which is very essential. To demonstrate the efficiency of a fumigation, it is often the practice to place a bacterial culture somewhere in the room and later determine whether the organisms have been destroyed. It is not reliable to watch the flies upon the wall, for they will often be apparently unharmed after formalin fumigation. Formalin is essentially a plant poison and will kill bacteria and other plants more readily than it will kill members of the animal kingdom.

Another aid in reducing exposure to infection is public sanitary inspection of our food supplies and drinking water. The bacteriology of many of our food products is very complex, and it is seldom possible to directly isolate the specific organism of the various epidemics caused by infection through foods. We will take milk for illustration. In a series of over a thousand milk plates counted by myself at Chicago Department of Health in 1907, the lowest number of bacteria found was 17,000 per c.c., and the highest, 52,000,000; with a general average of 1,500,000. These samples represented the market milk as delivered to the customers. During that same year, one of the largest epidemics of scarlet fever that has ever been known in Chicago was traced to a public milk supply. Numerous other epidemics of scarlet fever, diphtheria, measles, diarrhea, typhoid fever, etc., have been traced to milk and other foods. Investigation of the milk supplies of some of our larger cities has led to the conclusion that from 10 to 20% of our public

milk supplies are contaminated with bacilli of tuberculosis, a fact which is at present causing considerable agitation to the honorable crusaders against the "Great White Plague."

More satisfactory is the bacterial examination of drinking water. While it is not probable that we will be able to isolate *B. Typhosus* from one or two ounces of water shipped to us in a medicine bottle, it is possible to determine by careful consideration and interpretation of the chemical and bacteriological findings in a properly collected sample, not only whether a given supply is contaminated, but the approximate degree. And when we consider the researches on "Typhoid bacilli carriers" and find that we have not only ambulatory cases of typhoid, but some patients who excrete the bacilli for from ten to forty years after the attack, and one author examining 1,700 healthy persons who had never knowingly had typhoid found the bacilli in 11, we are forced to the conclusion that water showing contamination of intestinal origin is liable to be the cause of typhoid and other enteric diseases. And whether or not the specific organism be isolated, its probable presence may be assumed and the source of supply should be regarded as unsafe for public drinking purposes.

Due consideration should be given to the proper disposal of garbage and sewage, as well as the sanitary inspection of dwellings.

Surely not least in importance is the proper diagnosis of the patients. How often we hear the remark, "I don't care whether this is typhoid or some other fever, I would probably treat it the same." Such attitudes are disgusting. Remember typhoid fever is a "filth disease," and every reported case is an open disgrace to the community in which it originated. Too often we hear of a case of diphtheria passed as simple tonsilitis and returned to school only to have

numerous other cases result from the error. Some mistakes in diagnosis are inevitable. Individuals react differently, virulence and resistance are variable and other modifying influences may contribute to the confusion. Hippocrates has well said "Experience is fallacious, and judgment difficult," but from this complex of probabilities and this chaos of possibilities, bacteriology has at least made some of the possibilities probable, and some of the probabilities, more probable. In using bacteriologic methods in diagnosis it should always be remembered that most of them serve only as aids in drawing certain conclusions when considered together with the clinical findings. The clinician determines the existence of certain disease. The bacteriologist demonstrates the etiologic factor. To illustrate: The clinician observes a membranous pharyngitis (with other findings.) The bacteriologist demonstrates the presence of *B. Diphtheria*. We may then reasonably conclude that we are dealing with a case of diphtheria, but either of these factors alone is insufficient. The mere presence of a membrane, or the finding of *B. Diphtheria* does not justify the diagnosis, for the membrane may be due to other causes or *B. Diphtheria* may be present in a normal throat.

Following is a brief resume of the most important diseases in which bacteriology may aid in the diagnosis:

1. Pneumonia—It is usually unnecessary to call upon the bacteriologist in diagnosing this disease, but it is of occasional interest to know what is the causative organism. The pneumococcus of Fraenkel is probably the sole cause of typical pneumonia and may be demonstrated in the sputum and by blood culture. Other organisms sometimes found are Friedlander's pneumobacillus, typhoid, colon, diphtheria, influenza and the pyogenic cocci.

2. Tuberculosis—Urines and sputa

may be sent to the laboratory and the B. T. B. can usually be demonstrated in pronounced cases, sometimes even in the incipient stages. Pus from cold abscesses may be examined, but failure to demonstrate the organism here is frequent even in pronounced cases. Suspected tubercular tissue should be placed in 70% alcohol or 4% formalin, to be sectioned and examined for the histologic tubercle. For more early diagnosis, tuberculin may be used either subcutaneously or dropped into the eye (Calmette's Ophthalmic Reaction) or by the vaccination method (Von Pirquet's cutaneous reaction).

Of these, the subcutaneous method is most reliable, but none of them is absolutely specific.

3. Meningitis—The fluid from spinal puncture should be collected. If turbid, this is best smeared upon a slide and this may be stained direct. If the fluid is clear, collect about one ounce in a sterile bottle and this may be examined for *B. T. B.*, by inoscopy, and a differential count may be made of the cellular contents.

4. Typhoid fever—The isolation of the bacteria from the blood, urine and feces is not practical except in hospital practice. The Gruber-Widal reaction, however, upon a drop of the patient's blood is of considerable value and may aid materially in the diagnosis. It is a well established fact that at least 95% of all typhoids give the reaction sometime during the course of the disease, and in most of the cases beginning as early as the 5th to the 8th day. On the other hand, it must be remembered that the reaction will persist for from 2 to 10 years or more after the attack; also that at times other diseases may give positive reactions. In 1906 I had occasion to examine the final diagnosis in a series of 250 cases giving positive Widal tests and found, out of this number, 14 to have been finally diagnosed as other

diseases. The fourteen final diagnoses were as follows:

1. Malaria; 2. Cholecystitis; 3. Pneumonia; 4. Pneumonia; 5. Pelvic Abscess; 6. Tuberculosis; 7. Catarrhal Jaundice; 8. Appendiceal Abscess; 9. Puerperal Sepsis; 10. Cancer of the Liver; 11. Ptomaine Poisoning; 12. Pneumonia; 13. Acute Rheumatism; 14. Cerebral Meningitis.

This represents an error of 5.6% or 94.4% of accurate results, based upon Widal's reaction alone. It must not be concluded that all of the above mentioned diseases will invariably give Widal's test, nor can it be assumed that this represents the entire list which are likely to give it. If we were to examine the blood of 250 normal individuals not suffering from any disease whatsoever, we would probably find typhoid agglutinins present in a considerable number of them.

5. Diphtheria—The organisms of Klebs and Löffler can be demonstrated either from the swab or culture taken from the edge of the membrane.

6. Gonorrhea—A thin smear of the purulent discharge will almost invariably show gonococci if the disease is due to that organism.

7. Malaria and relapsing fever, are best studied in fresh blood preparations, but the blood smears may be prepared and sent to the laboratory for identification of the parasites. Malarial blood should be collected shortly before the chill, and blood to be examined for *Spirocheta Obermeieri* should always be collected during the fever.

8. Anthrax—The organism can be readily recognized from smears upon a glass slide.

9. Glanders—A sterile swab should be inoculated from the lesions and sent to the laboratory. Smears on slides are usually insufficient, as it is generally necessary to determine the various stain-

ing properties of the organisms and prepare cultures, in order to establish its identity.

10. Rabies—In cases of suspected rabies, the entire animal may be sent to the laboratory or the brain may be carefully removed and sent. In positive cases negri bodies can be demonstrated by special staining methods, either from smear or impression preparations taken from the cerebellum or Ammon's horn, which requires only a few minutes' time and is very reliable.

11. Influenza—Pfeiffer's organism may often be found in sputum, swabs from throat or nose, and other places. It is often present in otitis media. The organisms should be collected on a sterile swab when sent to the laboratory, as cultures are necessary for their absolute identification.

12. Syphilis—Where the *Spirocheta Pallida* of Schaudinn is to be looked for, the lesions should be cleansed from any adherent exudate. A smear preparation on a slide is made from the juice of the tissue obtained by pressure and scraping, excess of blood being avoided. The preparation is then dried and sent to the laboratory. This organism should always be looked for before active treatment is begun.

1. Local pus infections are best studied from the inoculation of a sterile swab. This not only allows for smears, but cultures may be prepared whenever desirable.

Bacteriology has not only contributed aids to diagnosis, but through the efforts of bacteriologic workers, a host of bacterial products have been added to our therapeutic armamentarium, many of which have successfully prevented or cured specific diseases. The first of these products we owe to Edward Jenner, who performed the first vaccination May 14th, 1776. Edward Jenner may thus be fairly termed the father of ex-



perimentally acquired active immunity. Behring first announced the discovery of diphtheria antitoxine in 1890, which was our first contribution to acquired passive immunity. Acquired active immunity is up to the present time largely prophylactic and can hardly be expected to be curative. We have seen that it is brought about by accidental infection, experimental infection, or vaccination, and it is hardly reasonable to expect any very radical cures by the injection of an organism or a toxine from which the patient is already suffering. Much enthusiasm has been lately aroused on the subject of vaccine therapy, because of the discovery by Wright of the opsonic index. Let us hope that it may meet with success, but let us not draw too hasty conclusions. Experience has not yet sufficiently illustrated just what proportion of these wonderful results have been due to vaccine therapy, and how many are more properly the result of psycho-therapeutics.

Acquired passive immunity has lowered the mortality of diphtheria from 35% to 10%, and the statistics collected by New York Board of Health and other places show that when antitoxine is injected on the first day the mortality is almost nil. Tetanus antitoxine has not met with success as a curative agent, but as a prophylactic its efficiency is unquestionable. Recently Simon Flexner, of New York, has introduced an Anti-meningitis Serum, which promises to

supply our long felt want in epidemic meningitis. While this serum has not yet been found as efficient as antidiphtheritic serum, it promises a fair mortality reduction in epidemic meningitis if used early.

In conclusion, we must not overlook the bacteriological contribution to the field of surgery. The discovery of bacteria and their methods of culture has made possible a systematic study of disinfectants and germicides, wound infection and suppuration. In fact, it is our knowledge of bacteriology that has made surgery possible. The works of Pasteur, Widal, and Koch, which resulted in the presentation of the germ theory of disease, has raised a burden of untold misery from suffering humanity. Lister taught us the principles of antisepsis, and it is through antiseptics that asepsis is made possible. The modern surgeon now confronts his patient with aseptic instruments, aseptic sutures, aseptic hands, and aseptic technique, and if he be a worthy member of his noble specialty, he will be true to these principles and leave his patient with an aseptic conscience. He no longer speaks of "Laudable pus" in an amputation stump, but if he finds any pus at all, he will scratch his head and say "Wherein have I erred?" He no longer says, "I have operated upon you, may God heal you," for he knows the bacteriology of surgical technique and that the wound will heal by first intention.

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There are in the United States 298 sanatoria, 222 dispensaries and 290 associations for the treatment or prevention of tuberculosis, while there are 600,000 cases of this disease in the country. It is estimated by the United States Conservation Commission that this country loses annually \$1,000,000,000 from preventable tuberculosis.

Germany has 82 sanatoria for tuberculosis, which hold over 20,000 poor consumptives; the cost of each sanatorium is about \$100,000.

Through organized effective methods, Germany has reduced the death rate from consumption by one-half throughout the nation. In the German army, tuberculosis has diminished 42% during the past 20 years (from 3.3% per thousand to 1.9% per thousand of the effective force).

The number of deaths during the four years of the Civil War was 205,070. During the past four years 800,000 deaths have resulted from tuberculosis alone in the United States.

## CERTAIN CONSIDERATIONS IN THE TREATMENT OF EXOPHTHALMIC GOITRE\*

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The most telling treatment today of hyperthyroidism is that which is based on our knowledge, though limited, of existing conditions and not upon theories of the disease.

Recent evidence indicates that the symptoms are due to an excess of the thyroid proteid in the circulation; that in some increased vascular area of the gland, vascular or lymphatic, there is always a pathological focus; that each phase of hyperthyroidism is respectively accompanied by a distinct histological picture, and that the symptoms are due to the resulting change in the metabolism of the part. So, instead of treatment being principally directed to symptoms or the channels, (blood-vessels and lymphatics) of conveyance of pathological metabolic products, it should be directed to the prevention or the counteraction of the effects of this changed metabolism. The two lines of treatment so based are those of serum therapy and surgery, the employment of which shows such excellent results, that other lines of treatment seem indicated secondarily, and only in those cases in which these two are not applicable.

Ever since the early classical work of Halsted in 1904, when, by removing a part of the gland in dogs, he obtained compensatory hypertrophy, characterized by an increase in size and number of follicles, stroma epithelial cells, vascularity, also papillomatous infiltrations of the alveoli, and decrease in colloid,

to the very latest work, that of Dr. Lewis A. Wilson on the thyroids removed in hyperthyroidism by Drs. Charles and William Mayo, the histological pictures are similar; and to repeat, there are always present in hyperthyroidism, in some part of the gland, one or more structurally altered foci.

It is valuable and interesting to note instances in which have been found these similar histological findings in the thyroid.

The beautiful work in 1907, of David Marin, of Cleveland, showed similar pictures. In his work comprising 350 dogs, a few sheep and 173 human beings, he found 90 per cent of illy-cared for dogs in Cleveland, and the sheep in Michigan and Ohio near Lake Erie, with large thyroids of the above histological findings. In well-cared for dogs, and in sheep fed on iodine containing salts, the per cent of such thyroids was small. Incidentally, I will mention that in examining a large number of Michigan girls of the Western State Normal, one-half presented enlarged thyroids and about two per cent hyperthyroidism. This same histological picture obtained in MacCallum's work in 1906 and 1907, in his study of endemic goitre in dogs, together with 60 operative cases of hyperthyroidism in Halsted's service at the Johns Hopkins Hospital, and also in his latest study, in his 240 cases in the human. The work of Dean Lewis of Bevan's Surgical Clinic in Chicago, shows similar pictures. The present work of Halsted at Johns Hopkins may

\*Discussion of paper on the Treatment of Exophthalmic Goitre, by Dr. Jeanne Solis, at the Manistee meeting of the Michigan State Medical Society, June, 1908.

shortly add valuable additions to our knowledge. The histological pictures of the gland in hyperthyroidism vary with different stages in the disease, and somewhat in individuals, but, as before stated, as shown by Wilson, definite aspects and phases present corresponding clinical steps in the disease with definite clinical symptoms. The pathological findings are as follows:

1. Enlarged glands with increased vascularity (lymphatic and blood vessels), parenchyma cells increased in number, layers, and size, small amount of thin secretion, non-eosin staining.

2. Similar picture to (1), but an increase in infolding and papillary projection of alveolar walls.

3. Increased papillary projection; large amount of non-staining secretion; few desquamating parenchymatous cells.

4. Decreased vascularity; increased desquamation of parenchymatous cells; increased stroma; increase of thick, stainable secretion.

Now it is found, as before stated, in fact proven by MacCallum and Wilson, that the same changes in thyroid structures respectively accompany certain definite symptoms in hyperthyroidism. The summation of the above is that those glands showing large increase in parenchyma with thin secretion, are the cases of severe symptoms; those glands showing parenchymatous cell degeneration, with thick, staining secretion are cases in which the symptoms are subsiding; the thick, staining colloid being the non-absorbable remnant of the thin secretion and is not therefore accompanied by symptoms.

As to the physiological findings:

- (1) Iodine is a constituent of normal thyroid; it varies in the gland inversely with the hyperplasia, directly with the stainable colloid or thyreoglobulin and is a specific in endemic goitre.

- (2) There are two thyreoglobulins; one with potassium and iodine; the other thyreoglobulin contains potassium and no iodine and is the one most abundant in hyperthyroidism, especially in fatal cases.

The hyperplasia may indicate an attempt to supply some metabolic deficiency.

- (3) Feeding iodine to dogs with thyroid hyperplasia and a cretinoid nature reduces the activity of the gland; reduces lymphatic channels; lessens blood supply by producing obliterative endarteritis, and increases normal, stained colloid.

- (4) In hyperthyroidism, conditions indicate that a thin absorbable, possibly toxic secretion, is taken up by enlarged lymph and blood channels, producing the symptoms.

- (5) All things considered, hyperthyroidism is suggested as a stage of the diseased gland, ending later in myxoedema, or induration of the gland, or obliteration of functional tissue, unless arrested in its course.

- (6) Inasmuch as feeding the hyperplased thyroids of sheep to dogs with hyperplasia produces toxic symptoms similar to those obtained by feeding hyperthyroid humans thyroid extract, while feeding these dogs commercial thyroid preparations produces less toxic symptoms, but varying according to whether this commercial product is made from normal or hyperplased glands, the unreliability of thyroid preparations is evident.

One of my own cases of several years standing, operation refused, developed after a most obstinate pure staphylococcus anginal infection, a moderately rapid exacerbation, which was most surprisingly quieted by hydrobromide of quinine.

The methods and results of treatment at Johns Hopkins are fair samples of



intelligent treatment and results elsewhere. They have had many cases. Some, several years ago, were largely treated as nervous cases with one or two good results. Berkley has obtained results with lecithin; thyroedectin failed; X-ray gave some fair results, some cases sent to New York for Beebe serum did well. Now most cases are operated early, even cases with questionable diagnosis, in order to prevent the disease. But each individual case is a study for the mode and extent of treatment. Surgical treatment means, that, whatever the primary cause, the gland or portion which has reacted cannot again produce those conditions essential to the disease, as there does not follow an excess above the normal tissue and function in the remnant of the gland. The only satisfactory serum treatment, with complete cure, is that of Beebe's last serum of an animal immunized to the globulin of the gland. Some cases are cured; some improved. Perhaps this line of treatment, being especially advised, in highly acute cases, will ultimately become specific. But now, operation is the curative treatment. With such brilliant results, such cures as are presented to us by Kocher, Halsted, and the Mayos, aside from others, hyperthyroidism at present belongs to surgery. Kocher shows 83 per

cent, cured by operation; the Mayos show 70 per cent.

As this per cent varies with duration and secondary changes found, there is suggested the value of an early operation and the earliest diagnosis by the physician, even prior to the appearance of the ordinary symptoms, as for instance the suggestive symptoms.

One of the methods of early diagnosis, as advised by Emerson, is to feed small doses of thyroid extract, when if the disease has begun, symptoms of hyperthyroidism present. Perhaps, because of the inaccuracy of the commercial product which is obtained from the normal or hyperplastic gland, the scientific method would be to use hypodermically exact doses of the gland extract in saline solution, from the animal of the same species, the condition of the gland being known.

But thyroid surgery requires a most intelligent skill and technic; such pathological knowledge of the gland as to avoid the tiny parathyroid vessels, and such knowledge of the patient in regard to blood and heart conditions as to choose the proper time to operate and the best method and the degree.

There are but few such thyroid surgeons; these few have made the treatment by operation the best cure for hyperthyroidism.

**Medical Education Ideals.**—W. W. Keen, Philadelphia, in an address before the students of the medical departments of the University of Nebraska at its latest commencement points out what are or should be the ideals of the medical student in preparing for his life work. First he speaks of the ideal in acquisition which should include to a proper extent the acquirement of financial success; but, with this, he gives a special warning against the sin of covetousness. Besides money, we must acquire knowledge, and he speaks of the importance of a general education to the medical practitioner. Keen would have the doctor be conversant with the college requirements in both the ancient and modern languages. He should have a liberal education before beginning his professional studies. The teachers in the higher schools can give but a mere beginning, but they can show the methods by which the student can obtain knowledge. Second, they can inoculate their students with the en-

thusiasm for their profession, with the ideal of achievement. The medical graduate should not be content with acquiring existing knowledge, but should work to add to it by his own researches. Not everyone can be a great discoverer, but all who earnestly endeavor can add a little to the sum of our knowledge. The third ideal to be realized is the ideal of service and he pleads for erection and endowment of laboratories of research where work can be carried on that will be of benefit to humanity in general. The fourth ideal which the twentieth century demands is the ideal of character; all else may be won, but, if one fails in this, the other attainments are only apples of Sodom, turning to ashes at the slightest touch. The heroes of our people are not the great material organizers for the acquisition of wealth, but the high and lofty characters. The medical profession gives the highest opportunities for approaching this ideal. It stands pre-eminently for the ideal of character.—*Jour. A. M. A.*, June 26, 1909.

## ABDOMINAL DIAGNOSIS\*

H. E. RANDALL, M. D.,

Flint.

Abdominal diagnosis is one of the most difficult branches of medicine. The multiplicity of organs and the number of diseases to which they are liable has no parallel unless it be in intricate differential diagnosis of nervous diseases. Every fact that may be learned about a patient may have a bearing on the diagnosis. His previous history and habits may have a great bearing on the patient's present trouble. In soldiers returning from a tropical climate we should be on the watch for amebic abscess of the liver, also for the animal parasitic infections. The family history may shed light on the trouble from which the patient is now suffering.

The most common symptoms of abdominal trouble are pain, rigidity of the muscles, tumor, fever, and vomiting. The pain and its mode of onset, its exact location and whether it has shifted, its relation to the taking of food, or the movement of the bowels are very important things. The "stone-in-the-stomach" feeling comes on after eating in dyspepsia; the pain is increased by eating in ulceration of the stomach; a hyper-acid condition of the stomach causes a burning feeling several hours after eating when the stomach is empty, to be relieved by eating. The pain of duodenal ulceration comes on from two to four hours after eating or at the time when the food is passing from the stomach into the duodenum. Gall-stone colic comes on at night when the gall bladder is filling up with its supply of gall. A

colicky pain is relieved by pressure, but as soon as an inflammatory condition is present, pressure increases the pain. The pain of a solid organ is dull and continual; the pain of a tubular organ is colicky, with relief between contractions. Many abdominal diseases have a common history, as ulcers of the stomach, gall-stones, and appendicitis.

In the acute serious troubles of the abdomen the first pain is not always at the seat of the trouble, but in a few hours, when local peritonitis starts, then the pain becomes localized and usually accords with the point of tenderness. When local pain and local tenderness co-exist at the same point we have the most important diagnostic aid that we have in the acute and dangerous diseases of the abdomen, such as strangulated hernia, acute pancreatitis, perforation of the stomach, rupture of large organs, such as liver and spleen. Tenderness and pain over the Mayo-Robson point justify a diagnosis of gall-bladder disease. Pain and tenderness over McBurney's point mean appendicitis.

The next most important symptom after pain is rigidity of the abdominal muscles in the acute serious diseases. I lost one patient who might possibly have been saved, if I had not allowed myself to believe that the rigidity was due to voluntary effort. I shall never do it again because I do not believe that a patient can voluntarily, by simulation or through nervousness, imitate true abdominal rigidity.

\*Read before the Genesee County Medical Society, April, 1909.

### Referred Pains.

An acute appendicitis does not usually start with a pain over McBurney's point, but usually commences in the pit of the stomach. Gall bladder disease has often been mistaken for some stomach trouble. The pain of uterine disease in many cases is more in the small of the back than in front over the uterus. The pain of tubal and ovarian disease is more in the groin extending to the hip and down the outer side of the leg.

Dr. Morris of New York makes a valuable suggestion in testing for tenderness over the lumbar ganglia. Nephritic colic extends downward towards the testicle. Intestinal obstruction at any point produces pain around the navel. A pain in the left inguinal region is common in appendicitis when there is a pelvic exudation. The pain of disease of the liver is usually referred to a spot in the back near the spine. Stomach trouble often has a pain that feels as if it extended from the front to the back. If it be recalled that the 12th intercostal nerve supplies the lower part of the abdomen and hip, it is readily seen why so many cases of trouble in the chest have pain in the abdomen. In children especially is pain in the abdomen a common early symptom of pneumonia. In locomotor ataxia we may have gastric crisis that will simulate abdominal disease. And, on the other hand, remember that a hysterical patient is not necessarily immune to an acute inflammatory condition of the abdomen.

### Fever, Pulse and Collapse.

The type of fever a patient has will sometimes direct inquiry correctly, for instance, the irregular fever of tuberculosis, Wunderlich's "Staircase" fever of typhoid, the angle or steeple type of gall bladder infection, and also of septic conditions, the regular chills and fevers of malaria. A double infection of malaria and typhoid have the

malarial symptoms prominent only at the beginning and the close of the run of typhoid. A sudden fall of temperature may mean a hemorrhage, or a perforation of the bowel, and an irregular fever with muscular pains and a great deal of abdominal discomfort may occur in trichinosis. The pulse and rigidity of the abdominal muscles, however, are the most reliable symptoms in the acute diseases of the abdomen.

The vomiting of abdominal diseases must be distinguished from that of cerebral disease.

After getting a good history we are ready for objective signs and we first use our eyes. Standing back from the patient we observe asymmetry, or general enlargement or bilateral swelling, where it is not natural. In bilateral cystic diseases of the kidneys we find both loins bulging instead of a notch or sway from hip to ribs. It may be an enlargement due to a tumor in some region of the abdomen. It is safe to say that a bulging or swelling that may be seen has usually been discovered by the patient. If it is a cyst, it has a rounded appearance. The fluid does not seek the flanks as ascitic fluid will. Getting closer to the patient we notice the condition of the superficial veins, and watch the respiration to see if it is restricted at all. In inflammatory condition of the appendix the breathing does not go down as far on one side as on the other. In gall bladder or hepatic disease the right side is held quiet as it would be in a pleurisy. Inspection will show the pot-belly of scrofulous children, tympanites, and the retracted abdomen of wasting diseases. In intestinal obstruction we notice the violent intestinal contraction depending on the location of the obstruction. The color of the skin is observed: the pigmentation of Addison's disease, the jaundice of hepatic disease; one notes the contour of a dilated stomach enteroptosis, hernia, etc.



The veins of the navel are observed. The position the patient assumes may be of service in forming an opinion. In inflammatory conditions the limbs are flexed and drawn up; a position I have noticed in appendicitis, is lying on the right side, curled up like a fetus. Scars of former operations, puncture, etc., are noticed. Carefully notice if the patient uses pressure on the tender spots. In intestinal colic pressure gives some relief, while in inflammatory condition he holds his hands to protect himself. In inflammation he points to or gently touches the spot of pain and the direction the pain may radiate.

On palpation let me say I have scant honor for the man who claims that his sense of touch is so acute that he can feel the appendix and can do many things that ordinary individuals cannot do. The only time you can feel an appendix is when it is of no earthly use to feel it, except to be sure the patient has an appendix. When there are no adhesions, by starting at the iliac vessels and sliding the fingers along, the worm will slip underneath. I have seen men with sense of touch so acute that in palpating a gall-bladder they could feel the gall-stones and immediately upon operation find a suppurative appendicitis. Bobb, of Indianapolis, did the first gall-bladder operation in the belief that he was operating on an ovarian cyst.

Palpation is said to be the most important method of examination, and the more acute a man's touch the more he can get out of it. Israel, who examines the kidney in a position midway between lateral and dorsal decubitus, has been able to find a tumor no larger than half a cherry—but had it occurred at the upper part of the kidney it might have attained an enormous size, before even an Israel could detect it, notwithstanding the accompanying symptoms pointing to it, such as hemorrhage or colic.

It is of the greatest importance, when a tumor is felt, to know from what organ it has its origin. If a tumor has the form of a kidney it is probably of renal origin. If it has a sharp lower border it is probably of hepatic origin. If a tumor has two or three notches it may be the spleen. A new growth of the abdomen may give rise to fever even before infection or ulceration takes place. A tumor may be nodular, but owing to a thick abdominal wall it may feel smooth. Tumors of the gall-bladder are pear-shaped. Tumors of the pylorus and of the intestines are cylindrical. If a tumor can be indented it is probably made up of feces and occurs only in the large intestines. If a tumor be of the abdominal wall above the transversalis fascia it becomes more prominent when that muscle is contracted. If below the transversalis it becomes less prominent.

In some cases a tumor may be distinctly felt, but an absolute diagnosis cannot be made. A sarcoma of the retro-peritoneal glands and a cyst of the pancreas are examples. Tumors of the pancreas do not move with respiration.

Tuberculosis of the ileo-colic region and cancer of that region cannot sometimes be distinguished, even when the abdomen is open. The rarely occurring retro-peritoneal lipoma may fluctuate and thus deceive one.

A distension of a certain coil of intestine should cause you to suspect stenosis from some cause below it.

Tumors are affected by respiration, depending on their distance from the diaphragm. Those of the liver are most affected by respiration, less so are those of the spleen and still less those of the stomach. Gastric tumors on the anterior wall become more prominent if the stomach be dilated. Those on the posterior wall disappear. Distension of the stomach may serve to distinguish a dulness due to the liver and the spleen

by separating the dulness, the stomach lying between them.

In tumors of the female organs, if not attached by too long a pedicle, any movement of the tumor is transmitted to the cervix and can be felt by the examining finger.

Tumors of the intestines—fibroma, lipoma, cysts, cancer and sarcoma—have a course that may be general to them all. Attention is usually directed to them by symptoms of acute or chronic obstruction of the bowels or by bloody stools or by symptoms of gastric and intestinal dyspepsia. We need some sign by which carcinoma may be diagnosed at an early stage before cachexia has developed. Dr. Crile's hemolytic test may be the solution of this problem. Dyspeptic symptoms, with colicky pains and abdominal distension, should be looked upon as suspicious symptoms.

Blood in the stool is more fresh the nearer the hemorrhage is to the rectum, and one should look for ulceration, neoplasms, etc.

Vomiting may be the only symptom in a case of beginning cancer of the bowels. Vomiting of blood indicates an injury to the blood vessels, usually caused by ulceration.

In a word: "Palpation of a tumor should show its size, shape, possible change in shape, relations to surrounding parts, consistence, creaking (echinococcus), pulsation, connection to organ or origin." Without a tumor it may show the points of tenderness, rigidity of muscles, and the condition of the openings at the usual sites of hernia.

In a paper on abdominal pains I said that in acute abdominal trouble ordinary physical examination usually revealed but little, and we must more diligently study the clinical history. After getting a good history we are ready to begin our examination, which should be systematic; first, inspection; second, pal-

pation; third, percussion; fourth, vaginal and rectal examinations.

Abdominal diagnosis is based on the history and abnormal conditions found by physical examination or by diseased secretions discovered by means of laboratory examinations. Anatomy forms the ground-work of correct diagnosis. The general topography and the anatomical points are the foundations of a right diagnosis. To illustrate, in a tumor of the left upper abdomen tympany or absence of it, enables one to distinguish between a tumor of the spleen and of the kidney. The splenic tumor is in front of the colon, so there is no tympany of the colon on percussion, while in a tumor of the kidney, there would be, because the colon lies in front of it. On the right side of the upper abdomen, the colon does not invariably pass in front of the right kidney although this was formerly taught. In a majority of cases only the lower pole of the right kidney is covered by the colon and in some cases the colon is below, so that on this side this point can not be depended upon for a diagnosis between a tumor of the right kidney and one of the right lobe of the liver.

The laboratory is an immense aid in some cases of abdominal trouble. The presence of sugar in the urine might direct your attention to the pancreas; the presence of bile in the urine, to the liver, and anemia may be associated with splenic trouble. In Osler's disease, Banti's disease or primary splenic anemia, the microscope serves its purpose with your clinical judgment. In splenic enlargement due to malaria, or in a case of a primary growth of the spleen the microscope must be used in coming to a conclusion. It is your clinical experience that tells you when to separate the urine from the two kidneys and when your clinical diagnosis and your laboratory results are the same, the diagnosis

is cinched. The following case illustrates my point:

A stomach specialist, after a chemical test, decided that a man had gastric catarrh, when if he had but taken the time to lay his hand on the upper part of this man's abdomen, he would have had no trouble in diagnosing an immense cancerous growth. It is your clinical judgment that tells you how to distinguish between hysterical manifestations and organic disease. It is your clinical judgment that tells a patient he is worse, when he thinks he is better, because the pain has suddenly ceased in gangrenous conditions, such as the appendix.

Finally, do not forget the aid that is given by a vaginal or a rectal examination.

Percussion determines dulness or tympanites or a change of dulness and tympanites due to change of position.

Bodies of a metallic nature are easily detected by the X-ray. The X-ray may be of some service in tumor, but its greatest service is in detecting stones in the urinary tract. Gall-stones are not shown by X-ray examination.

In conclusion allow me to quote from Edgar Allan Poe, who has written the best detective stories. This story has a moral. The physician is a detective in the highest sense of the word. By following a single clue he unravels the whole knot of the tangled skein. It re-

quires the same kind of instinct that makes a Dupin or a Sherlock Holmes.

Edgar Allan Poe in the "Purloined Letter" through Dupin, said: "There is a game of puzzles which is played upon a map. One party playing requires another to find a given word—the name of town, river, state or empire—any word, in short upon the motley and perplexed surface of the chart. A novice in the game generally seeks to embarrass his opponents by giving them the most minutely lettered names; but the expert selects such words as stretch in large characters from one end of the chart to the other. These like the other largely lettered signs and placards of the street escape observation by dint of being excessively obvious and here the physical oversight is precisely analogous with the moral in apprehension by which the intellect suffers to pass unnoticed those considerations which are too obtrusively and too palpably self evident." And in the "Murders of the Rue Morgue," Dupin again said that Vidocq, for example, was a good guesser and a persevering man, but thought he erred continually by the very intensity of his investigations. He impaired his vision by holding the object too close. He might see perhaps one or two points with unusual clearness, but in so doing he necessarily lost sight of the matter as a whole." Thus there is such a thing as being too profound.

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Orchitis after an operation for hernia is best relieved by wet or glycerine dressing with elevation of the scrotum.—*Am. Jour. Surgery.*

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Persistent bleeding or irregular prolonged menstruation is very suggestive of uterine fibroids.

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Large intraabdominal abscesses are often better drained by making a counter-incision in the lumbar region.

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Woven silver wire for suture material in a recurrent hernia will often succeed when all other means fail.

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One of the peculiarities of the medical profession, which the writer has had numerous opportunities to observe, is that a great part of its members has acquired the habit of prescribing solutions of iodide of potassium to be taken after meals. Whilst it is true that the salt acts under these conditions, it is equally a fact that the same dose will act better if it be taken before meals. This is easily explained if we but remember that when the iodine salt is taken after a meal the iodine combines with the starch of the repast to form an inert iodide of starch. If taken before eating it is absorbed and retains its activity.—*Am. Jour. of Dermatology.*



## ELECTROTHERAPEUTICS\*

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W. E. OGDEN, M. D.,  
Ionia.

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Since the discovery of electricity by Thales, the Grecian philosopher, many able and great minds have made progress in it. Work has been slow, it is true, but like all good things it has been sure.

Time forbids me to enter into the biography of these men, but I want to add my tribute to their memory by at least the mention of their names. They are Franklin, Galvani, Volta, Farada, Ohme, and our great modern wizard, Edison. They have made their names great by the blessings they have given to mankind. But it remained for the men of the latter part of the eighteenth and nineteenth century to introduce it as an aid in the cure of human ailments.

It is true, however, that electricity was used in the eighteenth century shortly after Franklin had brought down the lightning from the clouds with his kite, hemp and key. It was then observed that the human body was strongly influenced by the electric current. The blood ran quicker, the limbs were strengthened, the intellect aroused. Over-enthusiastic physicians reported great cures by this agency.

It was a period of great excitement in the discovery. Galvani spent his best and last efforts with the thought that he had discovered the principles of life. You will at once see it was a time when men were unfitted to get the most out of it in a therapeutic way.

The Franklin discovery had solved many mysteries, but it remained for Volta, Farada, and Ohme to give us the

means by which it could be used in the scientific as well as the commercial world.

Electro-therapeutics has rocks in its way towards its goal of success. Some of these are slowly being removed and some still remain. It is an agency which we may use as physicians for the relief of the suffering, but it is not a cure-all. Neither should it be used separately and alone. It has its field of usefulness, like medicine and surgery. There are certain diseases which medicine alone must treat, and in which surgery has no part, and again there are cases when surgery must come to the aid of medicine. So it is with electricity. There are cases where surgery and medicine alone will not do all, and here electricity may be used to great advantage, but must be intelligently used and with as definite knowledge about what is to be accomplished as when we use drugs in medicine and instruments in surgery.

To quote the late Dr. Herdman, of Ann Arbor: "About ten thousand physicians within the borders of the United States are using electricity as a therapeutic agency daily." So wide is its adaptability to the treatment of disease that it must become the common property of every physician. No matter whether his work is general or special, when employing it as a remedy, he must have a wider range of knowledge. The operator must know its minutest detail, how to generate and control, to measure and modify it. He must not be dependent for knowledge on the enterprising commercial merchant who sells us our

\*Read before the Ionia County Medical Society., Dec. 9, 1908.

battery and electro-therapeutic apparatus.

Dr. George Ohme, in 1827, placed electricity purely in the realms of science, when he formulated the well-known law which bears his name. The invention of the milliamperemeter and the rheostat placed the galvanic current in our hands and under our control. Just as small and as large a dose as desired may be given, in a scientific manner.

So I may add that one of the rocks electro-therapeutics has to encounter is lack of knowledge in this work. It is only recently that medical colleges have added it to their course of study. It has been considered a mystery and until we rob it of its mystery we can not intelligently use it as our own. We must make its laws our own in relation to our profession. It has been in the hands of the quack who knew nothing of the physical condition of the patient he was treating. In most cases he was not a physician and sought not the benefit of his patient but only the financial benefit derived for himself.

Then in the commercial world how often we find the word electrical or electric attached to nearly everything which is a fake. We have but to recall the many of our patients who have been duped by some one who has promised wonderful cures for deafness with some form of a battery which was unable to generate any current at all; or the cure of some disease by the use of the electric belts, all which have no value. Until today the physicians have been prone to consider the whole thing a fake.

Dr. Neiswanger said: "If a man put out a new stove polish which was no good, he was sure to add the word 'electro' to it." But electro-therapeutics only asks and appeals to us on its true merits. On this it must stand or fall, but it must be scientifically used with the proper knowledge and common sense.

Here let me say a word about a com-

mon method which has been employed by physicians in the past. The physician would take a Faradic battery from his office; he would treat his patient with the same, advise the patient to buy a battery or offer to loan him his, the patient to take his own treatment, and this often in the crudest manner by simply taking one of electrodes in each hand, drawing out the current controlled until he felt the tingling in the fingers. After holding this for five minutes to half an hour the current was shut off and the patient had taken an electric treatment, and the physician had used electricity in his practice, and it had done no good.

I do not believe this method can be too highly condemned by the progressive physician. The patient knows nothing of the laws of electro-physiology. He might as well have placed his hand on a telephone pole near his home and expect benefit from it as to employ the method described above.

If your battery is of sufficient strength and is applied in a proper manner it will do its work. It will do it for you, but it will not do it for the unskilled operator.

If electro therapeutics is needed the physician is the one to attend to it, and it should never be delegated to the patient. If we should be asked today, we often hear it asked, which is the best kind of current to use, galvanic, faradic or static, the answer would be "*There is no distinction to be made as to the superiority of one over another.*" Each has its own separate field. If one of you were asked today, which is the better drug, morphine, calomel or iodide of potassium, the answer would be, *what disease are you treating?*

Galvanism will do work which neither the faradic battery nor the static machine can accomplish. This is also true of each of these two. Each has its own indicated field of work. Today I am

deal with the galvanic and faradic current. I do not believe there is a physician among us who can afford to be without these two currents in his office. He will find more use for them than he will at first think possible.

The modern wall plate made by any good manufacturer is not expensive, and is the best apparatus in my opinion. It should contain both the galvanic and faradic current and if the electricity is generated by cells it should have forty cells in a series, which will give approximately sixty volts.

The faradic battery should have three or four cells. The plate should have a rheostat for the control of the current, milliamperemeter for the measuring of the current, the rheotome for the regulation of the interruption for both the galvanic and the faradic current.

I believe these are the essentials to the plate, and everything else added by manufacturers is useless, confusing, and expensive to the physician. Simplicity of construction and not multiplicity of switches is to be sought after.

The different diseases for which the two currents may be used are numerous—in gynecology, nervous diseases, rheumatism, constipation, ulcers, and many others.

Time forbids that I should enter into a discussion of all these, for it is a great field and would require a volume but I shall deal with copper electrolysis, for I have had more experience in that line than in any other. These are the methods used by Massey, Snow and Neiswanger with good results.

I believe that copper electrolysis has a large field of usefulness in gynecology, where there are certain diseases which may be treated with marked results and in most cases complete cure. Endometritis, cervical catarrh, and its accompanying symptoms, leucorrhea, also inflammatory conditions of the ovaries and tubes.

I am not prepared from personal experience to say that pyosalpinx can be cured by this method, but there are six cases reported, one of which is over eight years' standing, and at present has no indication of trouble. The diagnosis of this case was made before the patient was treated, by four members of the faculty of the Post Graduate School of Chicago. These cases may be found reported by Dr. Neiswanger.

We have treated our patients for these diseases with poor results, save by surgical means. We have given local treatments two or three times a week, or used our iodine, hydrastis, glycerine tampons, and intro-uterine applications. The patient would be relieved for a time, but in a few months at the longest would return to us or to some other physician for the same treatment until this had been repeated over and over again. In most of these cases we can effect a permanent cure by the use of copper electrolysis.

Now as to the technic of the treatment of a case in inflammatory condition of the tubes and ovaries. I wish to designate them by these terms for the cases I have treated by this method I am not prepared to say were more serious than that.

There is an electrode sold by most electrical houses which has a copper ball about three-fourths of an inch in diameter. This ball is perforated and hollow. On the other end is a receptacle for the cord. The copper ball should be covered by a chamois skin fitting tightly and tied securely to the ball. The chamois covering should be as wet as possible. The electrode should be carried up into the vagina beside the cervix to the tender place of the tube and ovary. Then attach the positive pole of the galvanic battery to the electrode, the negative to a pad at least six inches in diameter, this placed on the abdomen.

Now turn on your current gradually



until fifty or sixty Ma. is reached. You will have to be guided by the feelings of your patient. Usually after the first treatment the patient will not complain at fifty Ma. and the complaint which I have heard is not from the electrode, but from the irritating negative pole which is attached to the pad on the abdomen.

We must use fifty Ma. in order to get results. This treatment should continue from ten to fifteen minutes and about twice or three times a week.

What do we hope to gain by this treatment? First what is the condition, briefly stated? There is congestion, swelling, and tenderness, producing reflex symptoms; in many cases there is an infected condition of the tubes and ovaries. These manifestations find a remedy in the treatment by copper electrolysis. The positive pole dehydrates the tissue, relieving the congestion. It is also sedative, relieving the pain and tenderness. This alone might be only temporary, but now we come to the remedy.

The acid condition of the positive pole has rendered a small portion of the copper soluble, and the copper is an electro-positive, having an affinity for the negative pole. It has made an effort to reach that pole and is deposited in the tissues of the ovary and tubes. This may be demonstrated by the greenish color of the chamois skin after treatment. The action of the pure copper is astringent and of great germicidal value, several times greater than that of the acid positive pole. What more could be desired? You have relieved the congestion, pain, and sensitiveness, and sterilized the field with an agent which will in no way interfere with nature's work of repair.

In the treatment of endometritis and cervical catarrh the mode of procedure is quite different. The negative is attached to the large abdominal pad. There is a set of four intra-uterine electrodes, shaped like a common uterine

sound. On the curved end the copper is about one and one-half inch in length. The rest of the electrode is insulated with hard rubber. The outer end has a receptacle for the cord. The largest possible size should be used, the patient's feelings being first consulted. The copper should be amalgamated with pure mercury.

The patient in the dorsal position, a speculum is inserted into the vagina, and the cervix exposed. The electrode is introduced into the uterus up to the fundus, and the positive pole of the galvanic battery should be attached. The current is turned on gradually, until twenty-five or thirty Ma. is reached. The treatment should continue from ten to fifteen minutes, the current being turned off gradually. Then with the switch throw into circuit the faradic battery, with interruptions regulated by the rheotome from fifteen to twenty-five per minute, for five minutes. When the current is stopped, the electrode is firmly adherent, but by gentle rotation and traction it can be removed with slight annoyance to the patient; mucus and portions of the diseased endometrium will come away with it.

What is the aim in this treatment and what is accomplished?

What was said of ovaries and tubes is also true pathologically of cervix and uterus, for they are the continuation of the same tract. Congested, engorged, sensitive, and infected, what was accomplished in the ovaries and tubes will also be accomplished by copper electrolysis in the treatment of endometritis and cervical catarrh, and more, for the field of operation has been more completely sterilized by the copper, which has been deposited in the tissue of the uterus; in addition you have in a measure curetted the uterus, and introduced a non-toxic germicide which will prevent recurrence. I submit, is it not better than a curet, which opens the avenues for infection

and does not aid Nature in the repairs?

The faradic current is used at the close of this treatment for two purposes. First, as a massage to the uterus, stimulating it, and rendering the copper salt more perfectly absorbed. In the second place it tends to loosen the electrode from the tissues where it has adhered by action of the positive pole.

A slight flow will follow this treatment, but it will not amount to anything. But I believe we should tell the patient, for it will save her worrying. The patient should be treated no oftener than twice a week.

If you have a case of cervical catarrh with mucus plug, use the same electrode in the cervix up to the internal os. The same technic is observed. When the electrode is removed the cervical plug will come with it.

In fissures, unhealed wounds, and ulcers, I believe it is far better than wet or dry dressings. In all these cases any electrode can be used which will bring the copper in contact with the diseased tissue.

I am sure that in gonorrhea electrotherapeutics has a field. I am using copper electrolysis on several cases which have been stubborn and refused to yield to irrigation and injections, and the usual internal remedies. In all these cases there is marked improvement, and some of them have considered themselves cured, but I have learned that

with this disease time alone tells the story. I hope to give a more definite report in the future.

Copper electrolysis is recommended very highly in hemorrhoids, using a rectal electrode, but I am sorry to say I have not attained results sufficient to recommend it as highly as the other conditions I have mentioned. But I have used the same electrode in the same manner as directed for hemorrhoids in prostatic diseases, with good results.

I have mentioned only a few of the methods and pathological conditions where copper electrolysis may be used with good results. In all occasions for its use I want to again emphasize that there must be no guess work, but it must be used with strict observance of its laws and with a definite idea of the object to be accomplished.

I am sure that electro-therapeutics will keep pace in the medical world as a therapeutic agent. It will never eliminate medicine and surgery; such a claim would be quackery and worse than folly, but electro-therapeutics will be their right hand aid and with the three we can lessen the suffering in the world, and render human ills less formidable than in the past.

I appeal to every one—do not be skeptical, but come and test it intelligently, for we owe it to ourselves, our profession, and to our patients.

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**Point in Use of the Tallquist Scale for Hemoglobin Estimations.**—Walter H. Buhlig, Chicago, presents some comparisons of the readings of different-sized drops of blood on the Tallquist scale, with the results from the same patient on the Dare instrument. Taking a drop of blood of the size of the perforation in the color scale, the readings were practically always low, taking the Dare as a standard. When a spot of twice that size was read, the results obtained agreed closely with those from the Dare.—*Northwest. Quart. Bull.*

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After an operation for extensive carbuncle of the neck, a comforting support may be supplied by placing under the bandage a piece of heavy manila cardboard (book-binders' board), wetted and shaped to the back of the head and neck.—*American Journal of Surgery.*

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Any one interesting himself in medical legislation will be surprised at the magnitude and importance of the work. It is an index to medical progress and an essential factor in medical education. It is warp and woof of public sanitation. It concerns alike the public and the profession.

## DRAINAGE FOLLOWING CHOLECYSTOTOMY\*

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J. J. REYCRAFT, M. D.,Petoskey.

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Scarcely any operation in vogue at the present time is followed in details of technique by more than half a dozen operators; in other words, very few operators use the same methods to an end, but all alike are hopeful of securing the best results.

While a student in college 18 years ago I seldom witnessed the removal of an ovary, a non-suppurating tube, or appendix, without drainage being inserted. Today, however, very few operators would be found guilty of weakening the abdominal wall by the insertion of a drainage tube unless some suppurating condition existed.

As operations have changed in the past, so shall we expect to have them change in the future. If such be the case, it would seem to me that the methods used in operations upon the gall-bladder will in all likelihood be subject to change, and not the most unlikely change will be the discarding of excessive drainage, which I believe is at present unnecessarily made. I do not say drainage will be discontinued entirely, because in gall-bladder operations there will always remain a necessity for drainage in certain cases.

Cholecystectomy is performed for various conditions about the gall-bladder and the gall ducts. When there is some occlusion to the common duct and it becomes necessary to incise it, it is easy to understand why we should insert drainage until the natural outflow of the bile is again assured, but it is not

so easy to understand why, in every case of operation upon the gall-bladder alone, it seems necessary to many operators to almost invariably insert drainage. If the operation is for the removal of the gall stones from a healthy bladder, it is not easy to see the need of drainage.

If we find the gall bladder bluish green in appearance and the secretions are normal bile, very little excuse can be found for not sewing up the incision in the viscus and closing the abdominal wall as well.

If, on the other hand, there is a diseased condition of the lining membrane of the bladder, indicated by an abnormally dark appearance before incision, or if, after incision, the secretion lacks the healthy appearance so easily recognized by experienced operators, we must drain.

To allow the bile to escape free into the abdominal cavity, where it may gravitate into Morris' pouch or any recess into which it may find its way, does not appear to me proper, for it is capable of doing great harm.

I have seen many so-called good operators follow this method and when the operation was completed leave as many as half a dozen variously formed drainage tubes sticking out of a gaping abdominal incision three inches in length, making it possible that subsequently an operation for traumatic hernia will be necessary. Why not be more conservative in matters of drainage and close up possibly two-thirds of these abdominal openings and thereby lessen by 66 $\frac{2}{3}$  per cent the danger of post-operative bulg-

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\*Read at the Manistee meeting of the Michigan State Medical Society, June, 1908.



ings necessitating secondary operations? My only desire in this matter is to call the attention of the surgical profession to the inadvisability of the unnecessary hazards.

Presuming, however, that in certain cases we err in judgment and that drainage is really necessary to prevent future conditions which necessitated the original operation, is the opening of the abdominal wall and a second cholecystostomy such a dangerous procedure as never to be gambled upon? My idea is that it is not, and that a patient who has safely passed through one operation will readily consent to a second operation. We can thereby undo the former error by opening and draining. I believe that not one in ten cases would have to be

thus treated.

A word regarding the kind of drain used in cases where drainage is necessary. I might say that I have never used a cigarette drain in my life and so far as I have been able to observe I do not know as it will ever be necessary for me to do so, because I believe that no gauze drainage is efficient. I have learned to rely wholly on rubber tubing of a soft texture which I have never found to irritate any of the tissues with which it has come in contact. Even the intestines suffer not in the least from constant contact with rubber drainage tube. Any other drainage aside from the open tube has in my hands seemed inadequate.

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### THE DIVISION OF FEES.

In Illinois there has been going on for some time a discussion of the aggravated evil of dividing fees between the surgeon operating upon the patient and the physician referring the patient to the surgeon. The evil exists, doubtless, everywhere; it is contemptible and a dishonest practice. But is it not a question of whether one can legislate honesty into the individual? Here in our own state there are many well known surgeons of whom it is commonly understood that they will give a large portion of the fee charged for an operation, to the physician who sends the patient to them. They have cultivated agents, as it were, in many towns and counties and these agents know that their "commission" will be paid promptly. The judgment of one who will accept this "commission" must certainly be warped by the warm glow that cometh from the dollars to be received; he can not refer a patient to the patient's best advantage, for he is afflicted with monetary mental astigmatism. The patient is wronged for he is being deceived and deceit is

about the most detestable of all forms of petty crime. The surgeon is prostituting a noble and a liberal profession to pure commercialism. These things are admitted by every honest man, and the fact that the very men who participate in the underhand transaction "keep it dark," is conclusive evidence that they, in their hearts, also admit the dishonesty of it. Who that is guilty of the practice has sufficient real belief in the honesty of his deeds to come out openly and acknowledge that he is "splitting fees"? Is there a single one? If so he has not yet been heard from! If the physician wishes to do so, and he not only can but should, let him charge his fee for being with his patient and assisting at the operation; but let the patient know exactly what he is being charged, and what for. Is there not some way in which the shame of this vulgar transaction of "splitting fees" can be brought home to those who are guilty and the dishonest practice stopped or checked?—*Cal. Med. Jour.*

## The Journal of the Michigan State Medical Society

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AUGUST

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### Editorial

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I HAVE HOPE AND WISH THAT THE NOBLER SORT OF PHYSICIANS WILL ADVANCE THEIR THOUGHTS, AND NOT EMPLOY THEIR TIME WHOLLY IN THE SORDIDNESS OF CURES; NEITHER BE HONORED FOR NECESSITY ONLY; BUT THAT THEY WILL BECOME COADJUTORS AND INSTRUMENTS OF THE DIVINE OMNIPOTENCE AND CLEMENCY IN PROLONGING AND RENEWING THE LIFE OF MAN.—BACON.

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The new cocaine law, which was passed by the Michigan Legislature and which goes into effect this month, was drawn up by Mr. Charles M. Woodruff, of the Detroit bar, and was fathered by Representative Flowers, at the request of the legislative committee of the State Pharmaceutical Association. It is clear, concise and should be effective. Every physician should be familiar with its provisions and should see to it that they are enforced in his community.

The first and second sections are quoted in full, the important provisions being emphasized. They are:

"Section 1. It shall be unlawful for any person to sell or offer for sale, give away or offer to give away, buy or offer to buy, receive or offer

to receive any cocaine or its salts and alpha and beta eucaine or any of their salts; or any compound, mixture or solution or other product whatsoever of which cocaine or any of its salts or alpha or beta eucaine or any of their salts is a constituent or ingredient, except as herein provided."

"Section 2. Any person holding an unexpired certificate as a registered pharmacist or registered druggist may dispense any drug, compound, mixture, solution or other product mentioned in section one of this act, upon a written prescription of a duly registered physician, which prescription shall be retained in the pharmacy or store in which the same was dispensed by the proprietor thereof or his successor for a period of five years. Said prescription shall be filled but once, and no copy of it shall be taken by or furnished to any person, except the same be required for the enforcement of this act."

Section one makes it very clear as to what drugs, or combination, are intended and it further makes the buyer or the receiver liable to punishment as well as the pharmacist.

Section two provides that the drug may be dispensed only on the written prescription of a registered physician. It will be noticed that no mention is made of the amount which may be called for in a prescription. This is evidently omitted purposely. The effect will be that "dope fiends" will have to put themselves under the care of a physician, who may use his judgment as to how much may be purchased at any given time. As a prescription for cocaine cannot be refilled and as no copy can be made, each purchase must be ordered by the doctor. The section is also very clear as regards the ownership of the prescription file in case a pharmacy changes hands. The prescription must be kept at the place where the drug was dispensed for a period of five years.

Section three provides that wholesalers and jobbers must keep written signed orders for the drug on file for five years, while section four makes it mandatory for both the wholesaler and retailer to

open his files of orders or prescriptions for the inspection of any constable, police officer, member of the State Board of Pharmacy, member of the State Board of Health, Food and Drugs Commissioner or Inspector, and Inspector of Pharmacies. The penalty for the violation of any of the provisions of the act is a fine of \$500 or imprisonment for not more than one year, or both fine and imprisonment.

It will be noted that it is not within the province of any one officer or any board to make complaints. Any citizen may cause the arrest for a violation of the law, in the same way as he may take action against a murderer or a thief.



**A new morphine amendment** to the general pharmacy act was also passed by the State Legislature. According to the *Bulletin of Pharmacy*, to which we are indebted for the facts about these new laws, there is some confusion as to the exact interpretation of this morphine amendment. The Attorney-General, it would seem, has decreed that the amendment permits the sale of morphine and its derivatives only on the original prescription of the physician, dentist or veterinary surgeon, and that the prescription cannot be refilled or a copy given.

These are important new laws with which we should all be familiar.



**Have you collected your fee** for registering births during the year ending April 30th? There are still many physicians who are not aware that the state pays fifty cents for each birth certificate properly made out and filed. It may be poor pay for the trouble caused, but inasmuch as every physician should deem it his duty to see that his share of the work of keeping up the vital statistics

department is promptly done, this fee is so much extra. There are few practitioners who cannot pay all their expenses in connection with society work by collecting this fee. We are told, however, that many have not done so.



**The program for the state meeting** is practically completed and from the rapidity with which the available places were taken it is apparent that a fall meeting is going to be a great success. Never before has the program been filled so long before a meeting and never have so many titles been submitted. At least, this is true for two of the sections.

The address on Wednesday evening will be given by Dr. Archibald Church, professor of nervous and mental diseases in Northwestern University, Chicago. Dr. Church's subject will be "Mind Cures in General and the Emmanuel Movement in Particular."

The arrangements for the meeting have never been surpassed and there is every indication that the registration will be the largest since the Detroit meeting of 1903.

September 15th and 16th at Kalamazoo.



**The analysis of stomach contents** is a laboratory procedure which the thorough clinician often uses. Among those who know its limitations it is helpful, but it is so fallible that the inexpert should be cautious in its application. The examination of vomitus is of such little value, compared with the examination of contents after a test-meal, that it need rarely be employed. The gross characteristics of vomitus,—color, odor, consistency, reaction, mucus, blood, etc.,—are more important than the microscopic or chemical tests, and quantitative estimations are meaningless.



In using the test-meal there are certain factors which must be regarded as important. First, the normal habits of the patient should in a measure be imitated; the test-meal ought to be palatable, especially if the appetite is poor, and ought to be ingested at the usual time of a meal, when the stomach is empty. According to the customs or taste of the individual, the physician may use either the Ewald test-meal, or the Boas, Riegel, Fischer, Jaworski or Pfaundler-Sahli. These are withdrawn at various times according to their character. Many clinicians use not one, but two or more of these different test-meals, comparing results. In any event, one single analysis of gastric contents is now seldom deemed sufficient for important deductions. The personal element, the surroundings, and other factors, all of which are known to profoundly influence the chemistry of digestion, are so varying that it is only by comparison of several examinations that we can rely on them.

In the interpretation of results one should not be diverted by the fine-spun calculations of unimportant substances from the fact that the amount of free hydrochloric acid is still the best index of gastric secretion. Slight variations above or below the figures accepted as normal are not significant, since those figures are too arbitrary. But an absence or great excess of hydrochloric is surely notable. Likewise the persistent presence of organic acids is abnormal. It is seldom advisable to test for pepsin or rennet, because the ferments are usually secreted in close ratio to the hydrochloric. The microscopical and bacteriological examinations reveal few other details, which are, however, usually of secondary importance. Sarcinae, moulds, yeast, epithelial cells, bacteria, etc., may be of confirmatory, but not of primary value. Traces of blood should be regarded with little concern, unless one

can absolutely exclude the nose, mouth and lungs as sources, also raw meat, and abrasion by the tube.

The proper way in which to approach the interpretation of gastric analysis is first, to reason whether the findings are compatible with the physiological conditions in the case at hand; second, to enumerate the pathologic changes that would explain the abnormalities; third, to be cautious in drawing positive conclusions from insufficient data; and last, to use the analysis as supplementary to clinical aspects of the patient.



**The Little Stick** is a weekly publication probably not familiar to many of our readers. It is published in Detroit and has for its motto: "With Malice Toward None, with Charity for All—Except the Fakirs, Four-Flushers and Hypocrites." It is edited with a hammer, rather than with a pen, and pokes into the "corners which the big stick cannot reach." We would not like to attempt to parse some of the editor's wonderful English, but would like to commend the campaign which he has made against the indecent advertising of Kennedy & Kergan, Thomas & Babington, the Rhodes Company, and other quacks.

Under the caption, "Hard Lines for Advertising Doctors," last week's number says:

"One by one the rascals leave us." But don't get too enthusiastic about it, gentle reader, the rascals are not all gone, not yet; you and I are still here—yes—and we still have some obnoxious neighbors.

No one has really gone, but some are absent from their accustomed places. That is because the *News* and *Free Press* have put the taboo on the advertising copy of three local doctor shops.

Our old friends Drs. K. & K., Bab and Tom and the Rhodes Co. are missing. They will not be served to us at breakfast, lunch and dinner in the future.

All the local dailies have cut them out and they must now seek other and less insidious means of enticing the unwary.

Already an extensive publicity campaign has been inaugurated by the three doctor shops. Millions of circulars are being prepared for general distribution. Increased advertising space has been contracted for in Michigan and Ontario daily and weekly papers.

But there are other breakers ahead, and this time they appear in Canada.

The Ontario Medical Council finds the advertising of Drs. K. & K. objectionable, and proposes to suppress it. As the Ontario doctors have influence, and Canadian law is usually enforced along cold, hard lines, the prospects of Drs. K. & K. getting bumped are really excellent.

There are hopeful signs, but the job is not finished, there is still room for improvement. Many of the advertising dentists class with the fake doctor shops.

A loud-shouting Grand River avenue firm of dentists is headed by an ex-convict, who is not a dentist and who got his jail sentence for his illegal attempts to practice dentistry.

Another constant advertiser never saw the inside of a dentist college. This one is a graduate of the plow; he got his medical and dental knowledge cracking a whip over a team of oxen, and commenced active torture on the jaws of confiding idiots in Detroit while the plow handle and pitchfork callouses were still on his hands.

Peruna, Duffy's Malt Whiskey and other noxious nostrums still have space allotted to them in most of the local dailies.

The Personal and Medical columns are still doing business in every local daily paper, except the *Times*, and often contain matter that the U. S. government wouldn't allow you to send in your private mail.

However, the suppression of a few undesirable advertisers is something to be thankful for.

It is a partial cleaning of the Augean stables, but there is still plenty of filth to be removed.

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## Book Notices

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**Legal Medicine and Toxicology.** By R. L. Emerson, A. B., M. D., Member of the Massachusetts Medico-Legal Society, etc. Octavo, 593 pages. Cloth. New York, D. Appleton & Son, 1909.

Emerson's *Legal Medicine and Toxicology* will undoubtedly occupy its well deserved high rank as an authority on the subject.

It is characterized by a concise, unusually clear and complete section on legal medicine and is an admirable volume for reference in the solution of any detail question pertaining to malpractice, expert testimony and evidence.

The carefully written chapter on toxicology will be of great value to the medical profession and especially to the general practitioner. In it may be found full information relative to both the organic and inorganic poisons. The symptomatology, differential diagnosis, methods to pursue in the detection of the poisonous agent and the best treatment to be instituted in a given case are all exhaustively covered. Quite a complete treatise, admirably illustrated, showing the post-mortem changes produced by the various poisons will be of undoubted benefit to all practitioners as well as the toxicologist.

Another splendid addition to the work is found in the chapter on methods (macroscopic, microscopic and spectroscopic) of examining blood. This is dealt with in accordance with the importance of the work with reference to medico-legal questions.

A chapter or appendix giving "The State Laws on the Practice of Medicine" is a useful part of the general text and makes the volume complete in every detail.

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## IS LODGE PRACTICE A PREVENTABLE EVIL?

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A. B. HIRSCH, M. D.,  
Philadelphia.

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*From the Pennsylvania Medical Journal.*

The world-wide sociologic changes now realigning the classes bear no menace of graver import to the mass of our profession than that of the rapidly spreading form of practice connected with clubs or societies. Quite naturally, physicians engaged in teaching, writing, research work or other subventioned pursuits, busily and solely occupied with such specialties, may find but little interest in this (to them) seemingly abstract theme, but to the man out in the field, the general practitioner, with his very livelihood in jeopardy, it is indeed a problem of urgent



concern. That colleague is blinded to his necessities who fails to note the risk to his income threatened by this element in the community,—an adverse condition, however, that under proper guidance will permit of favorable modification or, in places, even of removal. It is my purpose to briefly consider some of the causes of the difficulty, to refer to its prevalence more especially in the state's metropolis, and to suggest possible means of relief.

The arrangement whereby doctors, under verbal or other contract, have for a stipulated sum treated members of clubs goes back to an early date. It has only been in recent years, however, and more especially among the crowded peoples of European lands that the struggle for existence brought about such a rapid extension of the lodge practice habit. Under the paternal guidance of a few monarchical governments like Germany, and under the stress of aristocracy trying to quiet the just and increasing demands of the proletariat, we are witnessing what promises to be a universal application of the idea of the *krankenkasse* in that realm. As shown by a distinguished medical authority, "In the kingdom of Saxony . . . ninety-six per cent of the population will be members." Again, the increase in capacity, speed and number of ocean liners has made simply a ferry of the Atlantic so that crowds of Europeans constantly reach and leave our shores according to the economic demand for cheap (unskilled) labor. Bringing their local customs and mingling with our native-born Americans in city and country, this exotic of lodge practice will show a rapid spread unless curbed by prompt, thorough organization and a firm attitude by the medical profession. Pennsylvania, in particular, being so largely an industrial state with such a variety of aliens in our midst, is peculiarly open to this income-destroying incubus, and the average physician (at no time in affluent circumstances) should become fully aroused to the threatened danger.

The sole apology for the growth of lodge practice abuse, sweeping aside all subterfuge of its advocates, is found in its supposed cheapness to interested members; in other words, in the exploitation of the physician to his detriment and for the imaginary financial advantage of these members or patients. It has been well described as a buying of his services at wholesale by the lodge and a disposition of said services at retail to its members. What a despicable application of

the idea of competition and, as a rule, by those who are the greatest sticklers for the rights and privileges of labor. Could there be a more humiliating situation for the practitioner of a liberal profession with high ideals as to his calling?

Some years of personal investigation as to the educational status of men engaged in lodge practice throughout Philadelphia have shown that **they are graduates of schools of various standards**, including even the universities. The majority, however, are the product of short term, low grade, proprietary institutions, men usually with little or no indoor hospital training, with only commercial views of professional ethics, who would probably prove failures in life without some such for an assured income. On the other hand, not a few honorable exceptions to this class have spoken bitterly of their losses due to omission from the undergraduate curriculum of a regular course on the business side of medical practice, and that they were thus forced into contract work. One expects to find, then, in this element the absence of *esprit de corps*, an indisposition to further organization, thus making it an easy mark for the scheming lodge promoter.

Overcrowding of the profession, largely by the low-grade proprietary schools, with consequent cheapening of professional services, has so repeatedly been shown to lie at the bottom of fee-cutting in our ranks that this phase need but be mentioned here. Even the intelligent non-medical public is at last fully aroused to the financial risks of the professional life, and a prominent leader of opinion in a recent university commencement address advised his hearers to select one of the newer specialties rather than enter medicine, law, the pulpit or electrical engineering as a life's calling. With the excessive output of our medical schools, far beyond the needs of any natural increase of the population, no one can predict how soon it may become necessary to follow our French confreres and, through the American Medical Association, officially appeal to non-medical educational institutions that their graduates avoid the possibility of semi-starvation in the practice of medicine.

At last year's session, on invitation of the officers, Dr. Holtzapfel, of York, read an elaborate, statistical paper, involving extensive original research, on the prevalence of this evil of lodge practice abuse throughout Pennsylvania. Nothing need be added here, then, to his demonstration as to the actual extent of the wrong. The value of the facts disclosed and the concis-



ions reached fully warranted the wisdom and necessity for devoting an entire general meeting of each annual session to subjects connected with medical economics.

My suggestions for reform will be concise and practical. Each interest other than ours has long been unified for its advantage in the present economic conflict, and delay within our ranks to thus seek mutual protection is directly responsible for the ills from which we now desire relief. Workers in other callings, and more especially in the trades, do not hesitate through their "beneficial orders" (often with grandiloquent titles) to apply to medical practitioners the very "sweating" methods they so vehemently condemn in the case of their own employers. It is more especially against this element that we must make common cause for protection. The time has passed for simply academic discussion of the subject; action is now to be expected. The consistent enrollment into a unified body of the 14,000 practitioners of the commonwealth; the obliteration of sectarian lines from our midst; following the example of what has been achieved by efficient organization in other states and through the American Medical Association,—all these now offer promise of better things in store. The business like methods of the Illinois profession are of interest in this connection. Its society has just accepted the offer of the American Medical Association to put a trained (paid) organizer at work until all eligible practitioners within the state are enrolled. Such expenditures would be well placed here, especially after the recent successful MacCormack campaign (in fact, it would be a logical sequence), and no time should be lost by our House of Delegates in starting the plan. Lodge practice abuse should be a stock subject of discussion for the general meeting on medical economics of each annual session of the state society and at least once annually in each county society. Then, too, the publicity afforded by monthly repetition in the editorial and other columns of the Pennsylvania Medical Journal would be of material aid in arousing our otherwise uninformed brethren. It is only another case of Daniel O'Connell's "Agitate! Agitate!! Agitate!!!"

The varying aspects of lodge practice abuse call for disposition according to locality, whether city or country. For example, the success of the Bucks and the Montgomery county medical societies shows that a firm front by a united profes-

sion makes possible suppression of evil in neighborhoods away from industrial centers. The country doctor, at least, carries the remedy in his own hand. Elsewhere, though, it is different. In cities and towns, with their varied phases of foreign and native-born population, one finds the tendency to union to be general among the laity just as real co-operation among physicians has heretofore seemed impossible and this explains why lodge practice abuse can not be suddenly reformed here. Investigation leads me to advise persistent agitation for "the free choice of a physician" by members of lodges, etc. This was the animus of the long drawn struggle just won by our brethren in Germany. This prevents discrimination against and exploitation of our profession by "promoters" while in the stress of the present industrial competition it affords at least equal opportunity for a livelihood to every physician.

There is one collateral factor worthy of consideration in this connection. Recalling the responsibility of the low-grade proprietary medical schools for overcrowding our ranks, so great a cause of the evil under discussion, physicians should taboo these dollar-getting concerns. Prospective physicians should be plainly told of the abuse of medical charity; furthermore, of the rapid spread of the many new cults and of the consequent diminishing prospects of a livelihood in our calling. Furthermore, if students have not a thorough preliminary education, sufficient for entrance into the higher grade of schools, they should invariably be dissuaded from entering on the medical life. Otherwise, the risk of failure in competition with better trained men is too great. It is the general practitioner who must drive home these facts upon the profession because the other medical elements of our generation will not mount the altruistic plane that would benefit the graduate while diminishing their own relative importance.

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## County Society News

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### Eleventh District.

At the Eleventh Councilor District meeting, held May 4, 1909, at Mercy Hospital Sanatorium, Big Rapids, the Mccosta County Medical Society entertained the members of the Eleventh Coun-

cilor District in a most enjoyable manner.

The day's entertainment began with a general clinic from 9 a. m. until 12 m. Drs. Dodge and Griswold each presented two operative cases. There were also presented several cases for diagnosis and general discussion.

At the close of the clinic, the meeting adjourned to the dining room where, as guests of the Sisters of Mercy, they were served a sumptuous banquet, followed by a short smoker.

After enjoying the hospitality of the Sisters, we adjourned to the second floor parlor to listen to the scientific program which was very interesting and instructive and consisted of the following papers:

1. Surgery in the Treatment of Diseases of the Skin, Dr. A. P. Biddle, Detroit. (Printed in full in this issue.)

2. Anatomy and Surgery of the Appendix, with a Review of Howard Kelly's Work, Dr. Richard R. Smith, Grand Rapids.

3. Cancer Problem, Dr. A. A. Spoor, Big Rapids.

4. The Use of X-Ray in Diagnosis of Diseases of the Stomach and Intestines, Dr. A. W. Crane, Kalamazoo.

5. Foreign Bodies in the Orbit and Ear, with Exhibition of Specimen, Dr. V. A. Chapman, Muskegon.

The above papers with the exception of Dr. Chapman's were illustrated by lantern slides and all were far above the average.

Dr. Biddle also demonstrated the use of carbon-dioxide snow as used in certain skin diseases.

The meeting closed with a banquet at the Western Hotel. Covers were laid for sixty. Dr. B. H. McMullen acted as toastmaster. After a few well chosen remarks, he introduced Dr. Collins H. Johnston of Grand Rapids, who gave an interesting talk on the "Early Diagnosis of Incipient Tuberculosis."

The party then adjourned to the Grand Vaudeville where Dr. A. S. Warthin of Ann Arbor gave an illustrated lecture on the "Ravages of Tuberculosis," showing facts in the course of his remarks which were simply appalling. Dr. Warthin's lecture closed the day's program.

DONALD MACINTYRE, Sec'y.

### Houghton.

The June meeting of the Houghton County

Medical Society was held at Calumet. Miss Bearhope, Relief Secretary of the Houghton County Antituberculosis Society, read a paper on "Some Phases of the Work of the Anti-tuberculosis Society," in which she stated that the object of the society is to promote a careful study of conditions regarding tuberculosis in Houghton County, to educate the public as to the causes and prevention of tuberculosis, and to teach proper care of tuberculosis patients.

The first stage of development of the society was that of organization.

The second stage will be that of educational effort and practical relief, and to this work the Relief Secretary will devote almost all her efforts. Cases will be referred to the Relief Secretary by the physician in charge, and the various hygienic requirements and methods in use for the prevention and alleviation of the ravages of the disease will be brought to the attention of the patient.

To teach children home hygiene, the nature of consumption, the conditions that favor its development will also be taken up.

The various features of the work were freely discussed by almost all the physicians present.

Dr. John MacRae, of Calumet, presented a case of tumor and the brain, in a man aged 26. The patient first complained of severe pain in the left side of the head and over the left eye. In about two months a drooping of the left upper eyelid came on, accompanied by a dilatation of the pupil and followed by a progressive paralysis of all the eye muscles, except the external rectus. A history of projectile vomiting is also given, and a recent ophthalmoscopic examination shows a double optic neuritis. He has been treated with large doses of potassium iodide as well as by the mixed treatment, with no perceptible benefit, except the clearing up of a temporary paresis of the muscles of the left eye, while under the care of Dr. MacNaughton. There is probably a syphilitic growth (although no specific history can be procured) in the region of the nucleus of the 3rd and 4th cranial nerves. A large chart was used to show the relation of the nuclei of the cranial nerves.

Dr. A. I. Lawbaugh, of Calumet, presented a case of actinomycosis hominis. This patient complained of pain in the right lower jaw which he thought was neuralgic, and caused by a diseased tooth. When a swelling appeared below the jaw, he consulted a dentist who after several examinations declared the teeth free from disease. In



October, 1908, three months after the appearance of the first symptoms, he consulted Dr. Lawbaugh, who found three distinct and separate swellings, boggy in character, with very slight fluctuation, and some tenderness.

In the positive absence of syphilitic infection, tuberculosis was decided upon, the swellings incised, curetted, and converted into one large cavity, thoroughly swabbed with carbolic acid, washed with alcohol, and packed with iodoform gauze. The wound was washed daily with warm water and repacked until closed. This took place in two months and it remained closed for one month, when it reopened with a very slight discharge.

It continued to open and close at intervals of a few days until two weeks ago, when it was again opened freely and curetted.

This time a fistulous tract, leading to the inner side of the lower jaw, was found, but no necrosed bone. The same treatment has been continued and the cavity is nearly healed. Dr. Warthin, of Ann Arbor, reports that a microscopic examination of the curetting shows a condition of chronic infective granuloma, due either to syphilis or actinomycosis. He was unable to find any colonies of the actinomyces, but is almost confident that the process is actinomycosis.

In connection with the case a short paper on actinomycosis was also read.

Dr. W. T. S. Gregg, of Calumet, presented a case of renal calculi. A young, married woman, aged 23, had suffered with pain in the right side for the past seven years. After frequent attacks much resembling those of appendicitis, with pain, vomiting, rise of temperature and pulse, she had her appendix removed in November, 1907, and while in the hospital was free from pain. Within one hour after her return home a severe attack of pain came on, followed at intervals of a few days by many others. An examination through the appendectomy wound at the time of operation, disclosed an enlarged, movable right kidney. After months of suffering she returned stating that Dr. H. M. Joy had catheterized the ureters and found clear urine escaping from the left ureter and pus from the right. Dr. Gregg then made an X-ray examination and found six shadows of calculi.

In April, 1909, he performed a nephrectomy through the usual lumbar incision and found a greatly enlarged, hydronephrotic kidney, containing 59 calculi, with a total weight of 90 grains. The patient has fully recovered with no sinus

and has gained 15 pounds in weight.

The operation scar, radiograph, enlarged kidney and calculi were shown.

Dr. C. W. Yarrington, of Calumet, read a paper on "The Diseases of the Thyroid," in which he stated that owing to the character of the gland our knowledge of its function is far from what we might desire it to be. He mentioned three theories as to the function of the gland, viz:

- (1) Its secretion is necessary for metabolism.
- (2) Its secretion is an antitoxin for the products of metabolism.
- (3) Its secretion contains an enzyme which digests and converts the toxic products of metabolism into useful and necessary substances for the organism.

Numerous arguments were presented favoring the last theory.

The essayist divided the diseases of the thyroid into three groups: (1) Inflammations; (2) Hypertrophic goitre; (3) Secretory disturbances, including (a) Hyposecretion (cretinism, infantilism, and myxedema), and (b) Hypersecretion (exophthalmic goitre, and Graves' disease).

Cretinism is hereditary. In infantilism and myxedema, while there may be an inherited tendency, the impairment or loss of function is determined by some lesion, generally an atrophy in the gland brought on by some infection, as syphilis, tuberculosis, pneumonia, typhoid, etc.

*Treatment.* The inflammations receive the same treatment as similar lesions elsewhere in the body.

Hypertrophies and Tumors:

- (1) Prophylactic—removal from certain districts, boiling of water, etc.
- (2) Medicinal—iodine and its derivatives in the parenchymatous and vascular types.
- (3) Organo-therapy in all types.
- (4) Surgical measures, if there is dyspnea, tracheal stridor, extension behind sternum, sleeplessness or inability to stoop without a rush of blood to the head.

In cases of hyposecretion, we have our best examples of the benefits of organo-therapy, such as thyroid extract administration. In cases of hypersecretion, the treatment is largely symptomatic, as rest, the application of an ice bag, the use of digitalis, belladonna, and the bromides, serum therapy, thyroidectin, electricity, etc.

Finally, surgery has given excellent results in the hands of some surgeons.

JOHN MACRAE, *Sec'y.*



**Jackson.**

At a special meeting of Jackson County Medical Society, on July 13, 1902, the plan of Medical Defense as proposed by the State Society came up for discussion. A committee was appointed to study farther into the matter and report at a meeting to be held July 16th. The committee submitted the following resolutions to the society at the adjourned meeting:

*Whereas*, There is now before the membership of the Michigan State Medical Society a proposal to incorporate in the by-laws of the society a certain definite plan to provide defense for all of its members against any threatened action for civil mal-practice, thus making such defense an integral part of the function and purpose of the society, and

*Whereas*, There are many members to whom the wisdom of the assumption of such function by the society is seriously questioned, and

*Whereas*, In the organization provided for, the plan proposed does not secure to the state at large a just representation on the Executive Board of the Committee on Medical Defense, nor does it secure to the component county societies any voice in the selection of this Executive Board, nor any voice in the choice of their own representatives on the Standing Committee on Medical Defense, and

*Whereas*, Some of the state societies are successfully defending their members through a branch organization which preserves all the advantages of the proposed plan and still leaves participation in this branch of the work optional with the member;

*Be it therefore Resolved*, That in our judgment, any plan of Medical Defense to be adopted by the State Medical Society should provide means by which an eligible physician may belong to his county society and to the society of his state without endorsing the Medical Defense plan or contributing to its support; and be it further

*Resolved*, That the attention of other county societies be called to the features of the proposed plan as mentioned in the foregoing clauses; and be it further

*Resolved*, That our representative to the House of Delegates be instructed to act in accordance

with the purport of these resolutions.

Respectfully submitted,

W. H. ENDERS,  
D. E. ROBINSON,  
T. S. LANGFORD,  
Committee.

The resolutions were unanimously adopted.  
R. GRACE HENDRICK, *Sec'y*.

These resolutions were referred to the chairman of the Committee on Medical Defense by the State Secretary. See page 388.

**Monroe.**

The summer meeting of the Monroe County Society always takes the form of an outing. This year it was held at the Yacht Club on July 15th.

The papers consisted of one on "Apoplexy" by Dr. Charles W. Hitchcock, of Detroit, and one on "The Nature and Treatment of Gun-shot Wounds" by Dr. Frank B. Walker, of Detroit.

After the scientific meeting dinner was served at Johnson's Island and a boat ride on Lake Erie thoroughly enjoyed by all present.

C. T. SOUTHWORTH, *Sec'y*.

**Correspondence.**

The resolutions adopted by the Jackson County Medical Society (page 388) were referred to Dr. F. B. Tibbals, chairman of the Committee on Medical Defense. The following letter was received:

Detroit, July 22, 1909.

To the Editor:

Kindly grant me space to discuss the communication and resolutions of the Jackson County Medical Society concerning Medical Defense, published elsewhere in your columns.

The resolutions oppose the plan under three heads:

1. "Many members seriously question the wis-

dom of such a function by the State Society." The postal card vote and the subsequent action of the House of Delegates will determine the truth of this statement, and if more than a small scattering minority oppose it, the plan ought not to be adopted.

2. "In the organization provided for, the plan proposed does not secure to the state at large a just representation on the Executive Board of the Committee on Medical Defense, nor does it secure to the component County Societies any voice in the selection of this Executive Board, nor any voice in the choice of their own representatives on the Standing Committee on Medical Defense."

Medical Defense is purely a business proposition and since the Council is the business body of the State Society when the society is not in session, it seems wise to have the Council conduct this business as it does all the other business of the society. So long as the Council meets in Detroit, the secretary lives here and the *Journal* is published here, it is absolutely necessary for the prompt and economical handling of threatened mal-practice cases that a majority of the Executive Board live here.

At the present time Detroit is practically the business headquarters of the State Society. Should these headquarters be removed to Jackson, Calumet or Kalamazoo then the by-laws should be changed to provide for a majority of the Executive Board in touch with headquarters. Then, too, Detroit, at the start, has the only members and the only attorneys who have had any considerable experience in handling this kind of work.

The local representative in each county should be an active man interested in the work and it makes little difference how he is selected, whether by his own society, or by the Council with the advice of the State Secretary who probably, from his official contact with the members, knows the active workers better than anyone else.

3. "Whereas some of the state societies are successfully defending their members through a branch organization which preserves all the advantages of the proposed plan and still leaves participation optional with the members."

Kentucky is the only state trying the above plan, and its experience, dating from September, 1908, is too limited to justify any conclusion whatever as to the feasibility of such a plan of organization.

Moreover neither Kentucky nor any other state has a plan as broad as ours, nor one which offers so much for so little. We propose to assume two years back liability on every member not sued or threatened prior to the initiation of this work, or, subsequently, prior to membership, and also to safeguard a member's estate after his death.

In other words we plan to furnish a fighting defense for a member, *when he needs it*, regardless of when the cause of action arose. We cannot assume suits already pending, nor allow men to defer joining the society until driven in by threat of suit, hence this exception in the plan.

Our plan at the proposed rate is not feasible, at least not safe, without the endorsement and co-operation of *all* the members, and I feel sure that Wayne County would not consent to abandon its absolutely successful Defense League for any voluntary branch organization with an indefinite income and uncertain membership. The same line of reasoning was brought forward at the adoption of the American Medical Association reorganization plan in this state, and much dread expressed at "forcing" members of local societies to belong to the State Society, nevertheless the State Society tripled its heretofore voluntary membership during the first year.

We aim to make a straight business proposition of this Medical Defense feature, so that after it has become sufficiently established to demonstrate that it can furnish adequate defense for every member, no reputable attorney will take these blackmailing cases. We expect to prove within five years that no better defense can be furnished, even by financially strong insurance companies, which demonstration will save the members of the State Society forty or fifty thousand dollars a year. In nine years a member would pay into the proposed defense fund about the cost of one year's insurance. Is the financial surplus of the medical profession so large that money is not worth saving?

By Medical Defense we mean the machinery for defense. Of course each man threatened furnishes his own defense. If he is actually guilty of gross negligence or flagrant malpractice, no attorney can prevent his being assessed for damages and costs. Yet the law only holds a medical man responsible for the average amount of knowledge and skill of his community, and unless negligence, carelessness or incompetence can be proven against him he is not legally blame-

worthy for unsatisfactory or even bad results. Many patients are ungrateful and it has become quite the custom to threaten the doctor with a malpractice suit unless he applies financial balm to their alleged woes.

Attorneys have sought these cases, having found medical men "easy marks" who usually could be relied upon to compromise rather than fight. Medical Defense by the State Society will change these conditions so that only actual malpractice will come to trial, with a resultant saving by the profession of much time, money and worry.

The following clipping from the *American Medical Association Bulletin* upon this subject is pertinent.

It has always been assumed that malpractice suits were more frequent in the city than in country districts. The experience of the Illinois Medical Society in the last two years has abundantly disproved this theory, as the committee have found that malpractice suits occur more frequently in country districts than in the city, and are brought more frequently against the general practitioner than the surgeon or specialist, and that consequently the plan of co-operative medical defense is of more value to the general practitioner in the country than to the physician or specialist in the city, since he is more liable to suffer from this cause and, if a suit is brought against him, the injury done to his reputation and practice is greater than that which results to the city physician. While the work of the committee has been of great value in the actual trial of cases, it has been of much greater value in checking the indiscriminate bringing of malpractice suits against physicians. The committee found that it was the custom of certain disreputable lawyers to write threatening letters to physicians, or even to bring suit in cases where they could not even state the cause of action. There was no intention whatever of trying these cases, but rather than be put to the expense of retaining a lawyer, physicians would often settle for a small sum, from \$50 to \$150, in order to dispose of the matter. Such a system was nothing less than blackmail and was one to which any physician was exposed. By putting a stop to this practice alone, the committee has saved thousands of dollars to physicians in the state.

If the profession of Michigan are not yet ready to undertake this work let us wait until they are, rather than adopt any plan which in any way limits the value or the scope of the work.

I presume that the matter might be arranged so that one or two of the counties, by majority vote of all their membership, should not desire to co-operate with the rest of the state, those counties could be left out entirely until they voted to come in. It is to be hoped, however, that the postal card vote will show the same overwhelming sentiment in favor of the proposed plan which met the preliminary announcement of the Committee on Medical Defense so that the action of the House of Delegates may be a truly representative one.

May I urge that every member of the Society briefly express his opinion on the postal card and then mail it?

Very truly yours,

FRANK BURR TIBBALS,  
Chairman of Committee  
on Medical Defense.

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Jackson, Mich., August 4, 1909.

To the Editor:

In this issue of the *Journal* appears a report of the action of the Jackson County Medical Society on the proposed plan of medical defense. The discussion of this report by Dr. Tibbals, of Detroit, Chairman of the Committee on Medical Defense, has been referred to the undersigned committee of the Jackson County Society, and we would request a little of your space briefly to intimate the reasons for our position.

We wish to state at once that our Society was one of those that responded unanimously in favor of the proposition as stated by Dr. Tibbals in his letter to the secretaries last November. In our opinion this preliminary action by the County Societies should in no sense be considered as endorsement of the plan as submitted to them for the first time the following February and now offered for our consideration and action in the postal card vote. We beg leave to take exceptions to any reference to this preliminary action of the societies as "overwhelming evidence in favor of the proposed plan."

While our objection to the plan proposed is on quite different grounds than those of detail of organization, we would call attention to the provisions by which complete control of the management is delegated to one county in such a way as to necessitate amendment of the by-laws before change can be made. Perhaps one could hardly take issue with Dr. Tibbals in his contention that Detroit physicians and some law firm of



the same city have more ability in handling such affairs at the present time; and perhaps this condition may continue indefinitely; but the advisability of the membership adopting a plan so inflexible in these matters that in no contingency can it be modified short of amendment of the by-laws seems at least to merit discussion.

As to the manner of selection of a member of the larger committee on Medical Defense, it would seem that the members of the local county society are best able to judge of the qualifications and fitness of the man who would have to care for the interests of any member in case of need.

While these points with reference to the provisions for the carrying out of the plan are in our opinion deserving of consideration, they are merely incidental to what we regard as the chief defect of the plan proposed.

The furnishing of co-operative medical defense is a purely business proposition. On this point, we are quite in agreement with Dr. Tibbals. We take the position, however, that a purely business proposition of this character should be conducted by a purely business organization.

To urge the furnishing of medical defense as an integral function of the State Medical Society is to ignore entirely certain other relationships of such an association which at the present time should be most carefully taken into account. The Medical Society occupies a quasi public position, which we all must recognize, and by virtue of which the medical profession hopes to take its legitimate position in the front ranks of the organized forces in the world's progress. The achievement of this position will make it necessary for the united profession to win and to hold the confidence of the intelligent public. Without this confidence, all attempts on our part to obtain legislation in the best interests of the profession, and for the safe-guarding of the public health, all attempts at combatting charlatanry and ignorance of things medical, will be more than seriously handicapped. It seems to this committee that to incorporate in the fundamental organization of the State Society provision for the defense of *any* member of the Society in *any* case of threatened malpractice without any determination of the merits of the case by some tribunal of the Society, is to give to the intelligent public good reason to hesitate in bestowing full confidence upon the profession in other branches of the Society's activity touching their interests.

To a physician who, from the inside, knows that

perhaps nearly all the cases of threatened suit for civil malpractice are only attempts at blackmail, it may seem that almost any means are justified which would act as a prophylactic in this regard. However, even the most intelligent and best informed of the laity believe that no such large percentage of threatened cases are unjustified. It has no bearing on the point in question to maintain that the layman's opinion is erroneous, and in shaping a policy for the organized medical profession, the attitude of mind of our friends outside must be reckoned with.

The argument that by medical defense is meant only the machinery for defense has very little weight with one who knows that the greatest part of defense in any case of threatened malpractice consists in the effort to prevent prosecution or the bringing of the case to trial. The argument that the united profession stands behind the threatened physician who may in some cases, at least, be quite blameworthy, will not add to the high esteem in which the medical profession would like to be held by the general public.

It is the opinion of this committee that before committing our Society to a policy which affects so vitally our relationship with the public the question of whether or not such a policy will offend their sense of justice and equity should receive most careful consideration.

That other state societies have recognized this objection in a plan of co-operative defense is evidenced by the fact that most of the ten states having a plan of medical defense have provided some means of avoiding it. The plans of Illinois and of New York are very similar in their scope to the one proposed for Michigan. With the exception of Pennsylvania and Maryland, these states were the first in undertaking co-operative defense. Practically without exception, with full opportunity for studying the details of the plans in operation, all the other State Societies subsequently undertaking defense have avoided this objection. Pennsylvania and Maryland, whose plans of defense antedate those of New York and Illinois, also avoided this objection. Efficient defense has been provided and this objection at the same time avoided by these states in one of two ways—either by providing for the passing upon the merits of a case in a threatened suit for malpractice by some committee of physicians provided for in the plan, or by instituting the function of medical defense in a branch organization in which membership is voluntary.

It is not our purpose to discuss the relative

merits of these two ways of avoiding this objection. We would state it as our opinion, however, that if a physician pays for defense, he wants defense that will always defend. This can be secured in a branch organization in which membership is not compulsory but is open only to members of the State Society.

It is argued that an organization of this kind in which membership is voluntary would not be feasible or safe. The fact remains, however, that organizations of exactly this character have been successfully carried on with a much smaller membership than even the most pessimistic would estimate for an organization of this kind in the Michigan State Society. It is also a fact that convincing evidence or argument to show that only a limited proportion of the membership of the State Society would avail themselves of the advantages of co-operative medical defense, if the choice be left to them, must have equal weight in showing that only this limited number really desire the defense. Granting, for the sake of argument, that only a minority would voluntarily join a medical defense branch, who will urge the adoption of a plan which would compel the majority to become parties to a scheme and endorse a policy which they do not approve; or, in other words, shall we adopt any plan that compels an otherwise eligible physician to support and endorse a system to which, on principle, he is opposed; or, declining to do this, to forego his membership in his county and his state society?

It is argued that adoption of a medical defense plan by the Society will call in new members. If membership in the State Society must precede membership in the branch organization for medical defense, the appeal to this class of men who would come in only for this feature would be made equally strong.

In conclusion, we wish to express the opinion that the membership of the Society should have presented to them more in detail the possibilities of other plans than the one which is proposed for adoption. We take the position that the matter of medical defense is not now so urgent as to demand that a plan be adopted *this* year, and that if a plan which affects the profession so vitally be the best plan, it ought not to suffer by more thorough investigation and by comparison with other plans.

Yours respectfully,

T. S. LANFORD,  
D. E. ROBINSON,  
W. H. ENDERS,  
Committee.

## News

The Blackwell Medical Society held its annual meeting in Detroit, May 19th, and elected the following officers: President, Dr. Jeanne C. Solis, Ann Arbor; vice-president, Dr. Mary G. Haskins, Detroit; secretary-treasurer, Dr. Anna O'Dell, Detroit; councilors, Drs. Lucy J. Utter and Grace M. Clarke, Detroit.

The membership of the American Medical Association was 33,935 on May 1, 1909, making a net gain for the year of 2,592. This is an increase in the past ten years of 25,938 members, or an average growth of approximately 2,600 per year.

A silver loving cup was presented to Dr. William D. Scott of Ithaca, by Dr. Stiles Kennedy, on behalf of the Society, at a banquet given by the Gratiot County Medical Society, May 28, at which Dr. Scott was the guest of honor.

Dr. and Mrs. O. A. Griffin of Ann Arbor sailed for Europe June 19.

Dr. G. H. Volekner has been appointed on the staff of city physicians of Detroit.

Dr. Perry Schurtz has been elected chief, Dr. Robert J. Hutchinson, vice-chief, and Dr. Christian Van der Veen, secretary of the medical staff of Butterworth Hospital, Grand Rapids.

Dr. W. A. Spitzley and Dr. C. S. Oakman, both of Detroit, have gone to Europe. They will attend the International Congress at Budapest, on August 29th.

Dr. John O. Groos has qualified as city physician and Dr. Harry W. Long as health officer of Escanaba.

The following members of the State Society joined the A. M. A. during the month of June: Basset, G. T., Ann Arbor; Berggren, T. J., Battle Creek; Black, J. C., Milford; Fluemer, O. C., Mt. Clemens; Macqueen, D. K., Laurium; Madajesky, E. H., Bessemer; Maguire, F. J. W., Detroit; Mates, E. L., Dowagiac; McVeigh, J. A., Detroit; Miller, E. C. L., Detroit; Parker, W. T., Corunna; Ribbeck, W. A., Addison; Ulbrich, H. L., Detroit.

After 18 years' service, Dr. S. M. Yutzy has resigned from the faculty of the University of Michigan.

A conference on the prevention of infant mortality will be held in New Haven, Conn., on November 11 and 12, 1909, under the auspices of the American Academy of Medicine.

An argument characteristic of the anti-vivisectionist, was set forth by a Mrs. Belais of New York, at the recent congress held in London. She said that the salvation of both man and animals depended on disproving the germ theory of disease.

Harvard has established a new department, to be known as the Department of Public Health and Preventive Medicine. Dr. M. J. Rosenau, the well known director of the hygienic laboratory of the U. S. P. H. and M. H. S., has been called to take charge of the work at Cambridge.

According to the statistics collected up to July 25th, these were 61 deaths and 3,246 persons wounded as the result of the Fourth of July celebration.

The Northern Tri-State Medical Association met at Toledo July 13th.

Colonel William C. Gorgas, sanitary officer at Panama, president of the American Medical Association, received the honorary degree of doctor of laws at the recent annual commencement of Jefferson Medical College, Philadelphia.

The Nurses' Central Directory of the Wayne County Graduate Nurses' Association is proving a success. During the past year, 603 calls were received. The following extract from the annual report is of interest: The subject of providing skilled nursing for people of moderate means is under consideration, but we feel there is no plan which can be carried out successfully, without the interest and co-operation of all the graduate nurses of Detroit, and we take this opportunity to make an appeal to them to give this matter their serious consideration, hoping they will be free with any suggestions which may help to put some plan in operation.

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## Marriages

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Pitt Stevens Wilson, M. D., Negaunee, Mich., to Miss Una Potter of Grand Rapids, June 30.

Lewis Almond Harmon, M. D., Marshall, Mich., to Miss Ethel Anna Conley of San Antonio,

Texas, June 23.

Joseph V. Grahek, M. D., Calumet, Mich., to Miss Alice Belhumer of Champion, Mich., June 22.

Burton G. McGarry, M. D., Fenton, Mich., to Miss Hazel J. Brown of Howell, Mich., June 3.

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## Deaths

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Dr. Silas M. Gleason died at his residence on Pleasant Street, Ionia, May 31, 1909. He was born in Bushwell Township, Montcalm County, on March 6, 1856. After attending the High School at Ionia, he went to the High School at Stanton, where he graduated with the first class going out of that institution. Deciding to study medicine he first went to Ann Arbor but completed his course in 1880 at Hahnemann College, Chicago.

Doctor Gleason practiced at Racine in Wisconsin, and then moved to Michigan, where he was in active practice at Hubbardston, Sheridan, Greenville, and for the last five years at Ionia. He was a skillful surgeon and had the respect of a large circle of friends both among the profession and among the laity.

The physicians of Ionia attended the funeral in a body. Interment was at Hubbardston.

Amanda Jane Evans, M. D., University of Michigan, Homeopathic Department, 1880; for more than twenty years a practitioner of Grand Rapids, died at the home of her daughter in that city, July 2, aged 65.

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Local applications of tincture of iodine is one of the most satisfactory treatments for small chronic ulcers.—*American Journal of Surgery*.

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The surgeon should keep closely in touch with cases of acute retropharyngeal abscess as serious edema of the glottis may develop and require tracheotomy for its relief.—*American Journal of Surgery*.

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Not all soft swellings of the axilla are to be incised. Aneurism of the axillary artery has been mistaken for abscess.—*American Journal of Surgery*.



## Progress of Medical Science

### MEDICINE.

Conducted by

T. B. COOLEY, M. D.

#### The Therapeutic Withdrawal of Salt.—

WIDAL discussed this subject at the Kongress fuer Innere Medizin. He himself and others have shown that in certain forms of nephritis there is a retention of sodium chloride, and that this retained salt causes water retention (edema) to maintain the osmotic balance of the body fluids. Achard observed that the excess of salt disappeared more quickly from the blood than from the other fluids, that it was stored in the tissues, and that the salt content of the blood did not increase in proportion to the amount retained. WIDAL also succeeded in producing edema regularly in nephritis by feeding sodium chloride, and proved furthermore that this is the only salt concerned in this phenomenon, and that urea, which is often withheld in nephritis, is increased in the blood rather than in the tissues. Strauss introduced the strict milk diet to reduce salt intake and further elimination, and this is sufficient in many cases to remove the edema, but WIDAL showed that in some cases the kidneys were unable to eliminate even the amount of salt present in milk, and found that in these cases meat and other foods formerly supposed harmful, worked well when given without any added salt. The least possible amount of milk for daily ration contains four times as much salt as a mixed diet, as well as nearly three liters of water and at least 120 g. albumin, which is more than many nephritics can take care of.

There are two stages of edema; first, the formation of invisible deep infiltrations, then the visible subcutaneous edema. The first is discoverable only by the weight, which should always be regularly watched.

In the cure by salt-withdrawal there are two ends in view, first to remove edema and retained salt; second to arrange a diet which shall preserve the salt balance. The salt intake is easily calculated. The strict milk diet gives 1.6 g. Na Cl per liter; a mixed diet without added salt about 1.5 g per day. With some patients the elimination is very slow, and diuretics must be used in addition. When all edema has vanished, and weight has been stationary for several days,

one may experiment cautiously as to the amount of salt permissible in the diet.

In the form of nephritis where nitrogenous compounds are retained there are found chiefly in the blood, and these patients are likely to develop a "dry" uremia. In the Na Cl retention urea may be present in the blood only in minimal quantities 0.2-0.5 g. per l., while in urea retention the amount may be from 1 g. to 4 g., and the greater the amount the graver the prognosis. The determination of the urea content of the blood is a much better guide than the clinical symptoms. In spite of edema and grave symptoms, if the blood shows nearly normal urea content, the salt withdrawal offers a good prognosis.

When nitrogen retention is present the food intake must be restricted. In salt retention, no salt must be added to the food—even the bread. 1.5 to 2 g Na Cl. weighed out, may, however, be allowed the patient, in addition to his food. The withdrawal is harmless, as unsalted food contains sufficient salt for the real needs of the organism. The nephritic without retention should also take very little salted food, as one can never tell when the kidneys may prove insufficient for its excretion.—*Centrbl. fur Phys. u. Path. d. Stoffwechsels*, 1909, No. 8.

#### Effect of Fever on the Course of Infection.

BARKANKEIFF conducted a series of experiments on animals in which aseptic fever had been induced by Aronsohn's method. The results seem to prove: (1) that during fever the organism is more susceptible to auto-infection by the bacteria inhabiting the body cavities, though genuine infectious diseases seldom occur in this way; (2) that fever greatly diminishes natural immunity, and renders the subject liable to infections to which it is otherwise immune; and (3) that the resistance of the organism to the entrance and growth of bacteria is so far decreased that even attenuated strains of the pathogenic bacteria readily gain a foothold and produce characteristic lesions.—*Zeitsch. f. klin Med.*, V. 68, p. 295.

## GYNECOLOGY AND OBSTETRICS.

Conducted by

B. R. SCHENCK, M. D.

**Ureteral Fistulae as Sequelae of Pelvic Operations.**—Sampson's study of the ureter in the normal and pathologic relations is an important contribution to gynecologic literature.

The anatomy of the ureter is first described.

The ureter has a sheath formed by adjacent connective tissue. As this is adherent to the peritoneum, above the broad ligament, the ureter remains attached to this membrane. The sheath also serves to protect the ureter from the invasion of cancer cells. The blood supply is derived from numerous sources and the entire ureter may be freed from kidney to bladder without causing necrosis; conversely rough handling of even a small portion of the duct may be followed by necrosis.

The ureter has been injured in almost every conceivable pelvic operation. It is in greatest danger when the parametrium is affected by cancer, infiltrated with exudates or where tumors are adherent to the peritoneum over its site or situated retroperitoneally. The most common site for the injury is at the crossing of the uterine artery. In dogs the author has cut the ureter across and allowed the urine to drain into the peritoneal cavity. The dogs recovered as the ureter occluded, hydronephrosis and hydroureter resulting.

Ureter fistulae may be divided into total and partial. In the former all urine escapes by the fistula and the danger of ascending renal infection is much greater. Cystoscopy, especially chromocystoscopy, is of aid in making an exact diagnosis. The ureteral catheter will not pass in cases of total fistula, the ureteral orifice appearing "silent" when observed. The condition of the kidney must be determined by palpation. Partial fistulae usually heal spontaneously, total heal only through complete stenosis of the duct with destruction of the kidney.

When a fistula occurs the proper treatment is to wait 3-4 weeks until the patient's condition has improved. Then an accurate diagnosis should be made. Partial fistulae usually heal spontaneously; if not, they should be treated like total fistulae. The operations are, vesical implantation, which is the ideal, but cannot be resorted to where the

kidney has been badly infected or partly destroyed; nephrectomy where implantation is not feasible either because of the site of the injury or infection of the kidney, and finally maintenance of the fistula. For implantation the transperitoneal route is to be preferred. The bladder should be attached to the ureter by 3-4 interrupted sutures and tension avoided by anchoring the bladder. Drainage is required.

To avoid ureteral injuries a knowledge of the anatomy is essential. Special care must be exercised in the conditions referred to above. A lateral ligature on the ureter may be removed within 48 hours and no fistula result; a clamp may cause necrosis even if applied but a few minutes. Longitudinal wounds heal, but transverse wounds cause a fistula. If after injury, it is impossible to implant or to anastomose, Sampson advises implantation of the ureteral stump on the skin surface and nephrectomy at a later date, in preference to ligation and burying of the stump which always entails the possibility of renal infection.—*Surgery, Gyn. and Obst.*, May, 1909.

**The Age of Menstruation.**—What is the average age of menstruation? This is a question which has occupied a number of writers, but has been most completely studied perhaps by Schaffer, who in 10,500 women who visited his clinic found that the average age when menstruation was established was 15.7 years. Menstruation comes on earlier in the country than in the city. According to Meyer, in 1,060 country girls it appeared on the average at 15.2 years, while in 4,936 city girls it appeared at the average age of 15.9 years.

The appearance of the menopause is rather more difficult to determine on account of the uterine disturbances that occur at that age. According to Schaffer the menopause comes on after 35 years in women who menstruate early, from 9 to 13. In those who begin at 14 to 17 the menopause comes on after 41 years. In women with very late menstruation, at 18 years, the menopause occurs earlier, that is, after 38 years. The average age in 903 women for the menopause was 47 years.

## PEDIATRICS.

Conducted by

R. S. ROWLAND, M. D.

**Gastric Digestion in Infants.**—CLARKE says that the investigations into the chemical and physiological processes which go on in the infant stomach during the process of digestion, may be divided chronologically into two groups: investigation before and after the introduction of the stomach tube. The studies of the first period are few and of little value, while facts of considerable importance have been determined by use of the stomach tube in regard to motility, acidity, pepsin digestion, the rennin coagulation. CLARKE'S review of the literature and studies show that many and contradictory results have been obtained; a few facts, however, seem to be pretty definitely proved.

In the first place, it may be said that all the factors present in the adult are found in a weaker form in the young infant. In the new born child, on the breast milk, the stomach usually empties itself in from an hour to one and one-half hours; as the child grows older this time becomes longer. The few drops of gastric juice found in the empty stomach are the remains of that secretion during the last meal, and are not due to a secretion into the empty stomach. The motility is more rapid in breast-fed children than in those fed on cow's milk or artificial food, and more rapid in the healthy than the ill child.

The acidity immediately after a meal is nil, but it steadily increases during digestion, and is less in the very young than in the older. On a barley diet free hydrochloric acid appears in the stomach in a few minutes, but on a milk diet it does not show itself for an hour or more, due to the fact that the casein has taken up all required for its complete digestion. The free acid appears later in disease than in health, due to the increased amount of food in the stomach and to the slower secretion of acid. In cases of pylorospasm, the acidity is increased. Opinions differ as to the occurrence of lactic and volatile fatty acids, but these probably do not occur in healthy breast-fed infants, while in those ill or on cow's milk, they are fairly common. Part of the acidity is probably due to a fat splitting enzyme in the infant's stomach.

Pepsin is present at all ages and in all kinds of

health, and acts in the infant's stomach, though to a less degree than in the adult. The peptic digestion goes on to the stage of peptones, but not beyond that.

Rennin occurs in the stomach after the first few weeks of life whether during the first week is a mooted question.—*Amer. Jour. of Med. Science*, May, 1909.

**The Effect of Certain So-called Milk Modifiers on the Gastric Digestion of Infants.**—Clarke's conclusions are as follows:

1. The motility of the infant's stomach varies inversely to the concentration of the food. The more dilute the food the more frequent may the feedings be given.
2. Lime water does not reduce the acidity of the gastric contents, the neutralizing of a portion of the acid being overcome by an increased stimulation of hydrochloric acid by the gastric glands. This may increase the amount of acid available for digestion.
3. Sodium Citrate acts on the acid in the stomach, converting it into Sodium Chloride and thus markedly reduces the "available hydrochloric acid."
4. Barley water seems to have no constant effect upon the chemistry of gastric digestion in the infant.
5. The type of infants who vomit persistently may be divided into two classes, hypoacidity and hyperacidity.
6. Test feedings should be given to this type of infants to determine to which class they belong.
7. A five per cent milk solution seems to be the most satisfactory feeding to determine fine differences in gastric contents.
8. On purely theoretical grounds, it would appear that when the acidity is lower than usual, doses of alkalies or hydrochloric acid are indicated while in hyperacidity, sodium citrate holds out the best hope of benefit.
9. Protein digestion in the infant's stomach is slight and is proportionate to the amount of hydrochloric acid in the organ.—*Amer. Jour. of Med. Sciences*, June, 1909.



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## Original Articles

### THE INDICATIONS FOR MAJOR GYNECOLOGICAL OPERATIONS\*

RICHARD R. SMITH, M. D.,  
Grand Rapids.

The subject which has been assigned me by your secretary, if dealt with in detail would compel me to far exceed the limit in time which a paper of this kind should reach. The question of indication is so intimately linked with all else in gynecology that one may hardly attempt to discuss it separately without feeling that he has left a great deal unsaid. A brief review of current opinions, however, and their tendencies, may still be useful.

I have thought it best with the time at my disposal simply to depict the attitude in which I believe we should approach these major pelvic problems and to outline the present status of professional opinion in regard to the handling of them. As in all great movements, the education of the laity has been a slow one and the general profession itself has been conservative in changing from an attitude of allowing nature to deal with these diseases practically unaided, to one of active mechanical interference. The changes have been slower on account of the early high mortality and imperfect results. However much the gynecologist may have erred in the

matter of details, there is, of course, no question but that he has been, in the main, on the right track. As the work has been perfected, the vast difference between the results of operative methods and more conservative ones has been apparent and with this the indications have become clearer and less the subject of discussion.

The problems met with in major gynecology are intricate and unlike those of other fields, involving, as they do, the maintenance of the important function of childbearing, the lesser one of menstruation, the patient's social and sexual relations, an oftentimes deep-seated sentiment in regard to the preservation of her organs of generation, and lastly, the more or less important function which the ovaries play in the metabolism. In forming his judgment in regard to the best course of procedure in any given case, the gynecologist cannot well neglect any of these things and obtain the best results. They are all important, although that importance will vary largely in the individual case. But this is not all—the patient desires, and if it can be given her, she has a right to demand freedom from pain and invalidism. She wishes, above all else, to take her

\*Read before the Ottawa County Medical Society, February 5, 1909.

rightful place in the care of her home and children, or to do her work and earn her living in the world at large, as the case may be. Generally speaking, I believe we, as a profession, have rather erred in laying too much stress on the preservation of the function of these organs and have not always accorded to the woman the plan of treatment which would bring her greatest happiness and contentment. An invalid, or semi-invalid mother or wife unsettles the family life, interferes with the rearing of children and leads, sometimes, to the estrangement of the husband. I do not wish to overemphasize this, nor to underestimate the importance of the matters of which I have first spoken, but I think one obtains better results if he emphasizes less her sexual functions and more the importance of maintaining properly her family and social relations.

*Cancer.* Of pelvic diseases, by far the most fatal is, of course, malignant disease, more commonly carcinoma. In spite of the discouraging results met with in the treatment of cancer of the cervix, the opinion of gynecologists as a whole is that hysterectomy is indicated in what we generally call beginning cases. The results have apparently been much bettered the last few years by the more radical operation. Wertheim and the many who have followed him, remove not only the uterus and appendages, but all of the parametrium and broad ligaments, all the structures about the ureters on either side, the upper third of the vagina, and sometimes the glands as they stretch upward behind the peritoneum toward the brim of the pelvis. Much the same operation is attempted from below, the perineum being first extensively divided so as to gain readier access to the pelvis. Most operators prefer the operation from above. It is a tremendously severe one, with a high mortality rate, but Wertheim reports 60 per cent of complete re-

coveries. Of the patients applying to his clinic he refuses about 50 per cent as being too far advanced. The operation is still *sub judice*, but is being extensively done now in this country. If cancer of the cervix has advanced too far to hope for radical cure, a thorough curettment with cauterization may occasionally be done, giving the patient some relief and oftentimes a considerable respite from the disease.

*Cancer of the body of the uterus* offers a far better outlook from that of the cervix; here a simple hysterectomy is often successful. It is needless to say, also, that only the earlier cases of this offer hope. I have personally known of several instances that have had no return. Kelly reports 81 per cent of cures; Boveé (quoting Hirst) one-fifth to one-third recurrences after hysterectomy for cancer of the fundus.

*Cancer of the Appendages.* Malignant disease of the ovary is tremendously fatal as regards recurrence; Cohn in reporting 100 cases of malignant disease of the ovaries operated in Schroeder's clinic states that but 10.5 per cent were living at the end of one year, the cure being maintained at the end of three to five years in 5 per cent. Unfortunately the diagnosis cannot often be made until the disease is fairly well advanced. It happens, not infrequently, that we remove what is apparently a benign tumor, to find under the microscope that we have been dealing with a malignant process. Personally I have operated on eight cases of malignant disease of the appendages; they have all recovered from operation, but all have had recurrences and died, with the exception of one patient living at the end of four years, but with a recurrence. One other patient lived two years after operation.

*Fibroid of the Uterus.* With improved technic and reduced mortality, the general opinion of gynecologists has become

more and more radical in respect to fibroids. Every fibroid causing symptoms, or of any considerable size, demands removal. This radical opinion is not shared by all men, but I believe if one considers the difficulties and dangers attending operation for advanced cases, the almost invariably perfect results, in uncomplicated ones, the danger from hemorrhage and of possible inflammatory complications and malignancy, also the effect on the nervous system of the patient (aware of her malady), it must bring one to a rather radical position in the matter. When the fibroids are small, the uterine wall slightly or not at all changed, a myomectomy will often suffice. Otherwise a supracervical amputation is advisable. Whether we shall leave one or both ovaries in removing such a uterus, is a matter still under discussion. There has been a tendency to save them in order to minimize the effect of the menopause.

*Ovarian and parovarian cysts.* Cysts springing from the ovary or parovarium always demand operation and the indication is, if anything, a stronger and more general one than with fibroid of the uterus. Such operations are attended by a very low death rate and by very satisfactory results in the elimination of pain and pressure symptoms, if present. They do away with the ever present danger of inflammatory complications, of injury, of twisting, or of malignancy. Cysts of large size are apt to cause serious pressure symptoms, and great distention of the abdominal muscles is apt to be followed by long continued relaxation. With simple cysts or dermoid, one should always preserve the uterus and as much of the appendages as possible. Cysts that are evidently malignant demand removal of both appendages. With papillomatous cysts one may retain the other ovary, if after careful inspection it shows itself to be free of disease.

*Inflammatory Conditions.* How shall we advise patients presenting themselves with the various inflammatory diseases of the appendages? Most frequent are those the result of gonorrhea. An acute salpingitis should be treated conservatively; mainly by bed rest, hot or cold applications and good nursing. Most cases, under this treatment, subside more or less rapidly, leaving the woman subject to new attacks, but oftentimes in good health for a long period of time. A certain number of those whose attacks have been short and infrequent may even retain the child-bearing function. Should an abscess form which can be readily reached from the vagina, it is best to evacuate this by a wide incision, entering the cul-de-sac back of the cervix. A radical operation can be done later with such patients, although a certain percentage never require it. Should the attack last longer than three or four weeks with little or no progress toward betterment, the woman becoming progressively debilitated, I believe it well to intervene surgically. In advising it, however, one must constantly bear in mind that the prognosis without the operation is by no means hopeless. Time and time again I have seen cases that have run along for many weeks suddenly begin to improve and recover from the attack. On the other hand, there is always a certain danger of future debility, more extensive lesions, and finally an operation under extremely bad conditions. It may be said, also, that these women do not always recover perfect health for any length of time. It is a class in which there is always a recurrence of the trouble, sooner or later. If a woman has been subject to frequent attacks, particularly if such attacks have been prolonged, operation is, I believe, almost invariably indicated. If the woman is young and the lesion comparatively simple, one may content himself with removing one or both tubes, as the



case may be, leaving one or both ovaries, if they are healthy; with older women, or with a more extensive process, the complete hysterectomy, or at least one that removes all of the mucous membrane of the cervix, is indicated. The results of so-called conservative methods, by which is meant the conservation of the uterus and part of the appendages, have been sometimes fairly satisfactory, but not always so. Many of these patients are unrelieved of the pain, although they are freed of the attacks, if the tubes are removed. Many of them have a persistent discharge and some return later or go to other surgeons for a radical operation. I am safe in saying that radical operation for gonorrheal invasion of the uterus and appendages is the rule of the majority of gynecologists of experience, today, and under this treatment has become satisfactory. The complete relief that such patients obtain far more than offsets any sentimental reasons, the preservation of menstruation and the avoiding of the menopause, which have been the strongest arguments on the other side. It might be added that a hysterectomy during the quiescent period gives no higher mortality, in experienced hands, than the less radical operation. The general profession has still to learn that hysterectomy, *per se*, is not an especially dangerous operation. Operations in the pelvis, which are followed by a high mortality, depend more on the lesion to be dealt with than with the particular organ to be removed.

*Tuberculosis.* If the general peritoneum is involved, the appendages being simply part of the involvement, and there is no pus present in the pelvis, it is well not to touch the appendages, but simply to evacuate the abdomen in the usual way of any ascites that may be present, and to close the abdomen. If, on the other hand, the appendages are extremely involved, and the peritoneum

but slightly, they, and perhaps the uterus, should be removed. A considerable percentage of such cases make good recoveries.

*Puerperal Infection.* The so-called puerperal infections, those that are not gonorrheal, following labor or abortion are, as a rule, best treated conservatively. When pus forms, it must, of course, be evacuated and this can be done from below. The prognosis is peculiarly favorable, although such cases may be slow in recovering. If uncomplicated by gonorrhea they do not tend to recur.

*Displacement of the Uterus.* We turn now to another class of cases. The question as to whether a retrodisplacement of the uterus should be corrected by operative measures or not, has been under discussion for years. I believe that the opinion that I am to give reflects neither that of the extremist in his advice as to operation, nor that of him who looks upon retroversion as of no pathological significance whatsoever. In spite of the fact that a woman often-times goes for many years with a retroverted uterus without discomfort, the fact remains that when a woman presents herself complaining of certain symptoms which we commonly ascribe to her displacement, that its correction is followed by relief. If a uterus is small, has never been pregnant, is causing no pain (and such a uterus should not) I do not believe it necessary to correct the position unless other operative work is necessary at the same time, in which case an Alexander, or if the operation is an abdominal one, any operation which shortens the round ligaments, may be done. If, on the other hand, the uterus is enlarged and the symptoms definite, the correction of the displacement, even though unaccompanied by other operation, may be wisely performed. A patient who requires extensive plastic work and who does not at the same time have the position of

the uterus corrected, is apt to be but half cured. Operation is to be preferred to the long-continued wearing of pessaries.

*Prolapse.* Practically every case of prolapse of the uterus is best corrected by operations and this operation should be planned according to the conditions to be met with. In a woman who has never borne children, a removal or shortening of the hypertrophied cervix and a shortening of the round ligaments may suffice. In younger women, also, who have borne children, the uterus should be preserved. An extensive plastic operation, combined with a shortening of the round ligaments, usually suffices. Most operators have given up entirely the operation called the ventro suspension or fixation. Vaginal fixation combined with plastic work has given excellent results when it seems desirable to retain the uterus. Toward the menopause and following it, there being no reason for the preservation of the uterus, better results are obtained, I believe, if it is completely removed. This should be combined with any plastic work that may be necessary.

*Subinvolution.* A considerable number of women presenting themselves to the gynecologist have a large, so-called subinvolved uterus. In the early years following this trouble, a curettage and the correction of other conditions present may be followed by a diminution in the size of the uterus and satisfactory results. As the years go on, however, the uterus loses the power of regaining its natural size, and curettage will have no effect. Such women may suffer greatly. It has been the generally followed rule in the past to do conservative work on patients of this class and they, as a rule, have been illy relieved of their trouble. A large number of operators today are removing such uteri from women nearing the menopause and the results have

been far better. In fact, few of the things in gynecology are more satisfactory than hysterectomy in just this class of cases. The objection to this operation is the bringing on of the menopause, but the woman is freed from pain, and if told of the nature of the symptoms, she does not, as a rule, suffer greatly nor long from them.

*Extrauterine pregnancy.* All cases of extrauterine are operative. This should be done at the earliest possible moment, except in certain cases of profound collapse from haemorrhage, in which case it is, as a rule, safer to wait for the recovery from such shock, which may be fairly expected, than to assume the risk of immediate operation in such a condition. This must be a matter of judgment in each individual case.

*Neurasthenia.* What is indicated in the patients presenting themselves with a well-marked neurasthenia? We may divide them into several classes. The patient with a neoplasm, infection, or other well-marked pathological condition should be dealt with much as any other patient. It may even be said that the indications are peculiarly urgent in such a case. There is also the patient with symptoms which have been referred to her pelvis, in which nothing wrong can be felt by examination; as far as operation goes, she should be left religiously alone. The most difficult of which to judge is the patient with the slight abnormalities—let us say a marked retroversion of the uterus, or a moderate subinvolution, or with markedly prolapsed and tender appendages. Some of the patients do best if these lesions are attended to, but it must always be understood that this constitutes but part of the treatment and that the neurasthenia will demand appropriate treatment afterward. With many such patients it is best to defer operation indefinitely and treat the other condition.

What I have said in regard to neurasthenia applies also to the simple disturbances of nutrition so often, but not always associated with it. There is no simple rule that will guide us in our judgment in this class. They consti-

tute, as a rule, a most unsatisfactory lot as far as operation goes.

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## TECHNIC FOR THE INTRA-MUSCULAR INJECTION OF MERCURY IN THE TREATMENT OF SYPHILIS

HENRY ROCKWELL VARNEY, M. D.,

Detroit.

The hypodermic method of administering mercury intra-muscularly is gaining favor over some of the older methods, in selected cases. Not to the extent of excluding the administration of mercury by the mouth or by inunction has this method grown, but from its specific advantages.

The administration of mercury by the mouth, while the most pleasant and convenient, is far from accurate. It matters not what salt of the drug is prescribed or the doses, the patient, intentionally or unintentionally, neglects to take the drug at the proper time, and no one can estimate how much of it is absorbed, even though it be administered in accurate doses.

So, also, with the inunction method; while the dose to be rubbed in is estimated and the time and mode of preparing the skin have been carefully outlined for the patient, unless the physician who prescribes the inunction will prepare the skin of the patient and administer the first inunction, thereby instructing the patient in each step of the method, he will only vaguely know what time is required in rubbing the dose prescribed in this particular skin, or how much time should be spent in rubbing or pounding in the medication.

It is a fact, and a very important fact, that the epithelial layer of the skin of our patients varies greatly, not only in thickness, but also in the manner in which the epithelial cells are shingled on and cemented together, Nature's means of preventing penetration. This explains, in part, why some skins are exceedingly adapted to the inunction method while with others it is almost impossible, with any amount of friction or pounding, to cause penetration of the average dose of mercury.

Any and all of the methods recommended for the administration of mercury present some objections. Some of the few objections mentioned are overcome by the intra-muscular injection, in that this method not only insures the most exact doses, but the absorption of the drug is also accomplished in a definite manner. Prompt control of the disease can be gained by this method with less likelihood of causing the disagreeable symptoms of mercurialization, which, when they occur, are of great importance pertaining to the patient's general resistance against the disease. In a certain percentage of syphilitics, it is the method of election.

The chief objection to intra-muscular injection is the painful indurated nodes



which not infrequently result in abscess or gangrene and emboli.

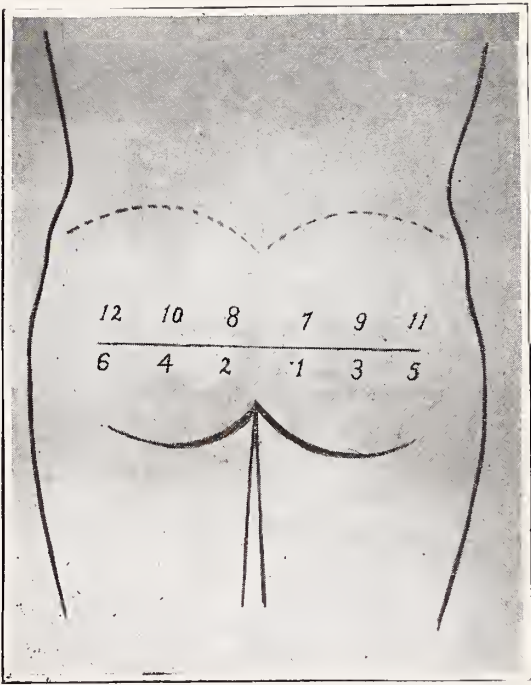
With several years of personal experience, and with the knowledge of the extensive experience of other syphilographers with the intra-muscular injections of mercury, I am quite convinced that the objections to this form of administration occur largely, if not wholly, from faulty technic. It is, therefore, the purport of this paper to outline what has been a successful technic.

It is of the utmost importance that the first hypodermic injection be successful, not only from the physician's standpoint, but in the mind of the patient also, for if success does not attend the first injection, the patient will likely seek treatment elsewhere, or will not allow a continuation of the injection method.

The region of selection is the gluteal. The depth of the muscle, the mild sensitiveness and the fact that this area cannot be seen by the patient and will admit of great pressure from the injection with less risk of circulatory interference, are some of the reasons why preference should be given to this area. In giving a series of injections every second day or third day, or even once a week, one must outline the location of each injection in each individual case. The varying size of the gluteal region and the depth should be carefully noted. By so doing one may prevent the most common accident that of injecting with too long or too short a needle or too near an area that has been recently injected, in which area the induration of the last injection still exists.

The chart outlining the areas may be of assistance. The line is drawn across the buttocks from the most prominent part of the great trochanter, and the injections given above and below this line, alternating the buttocks, beginning with the area marked No. 1, and so on until a dozen injections are well cared

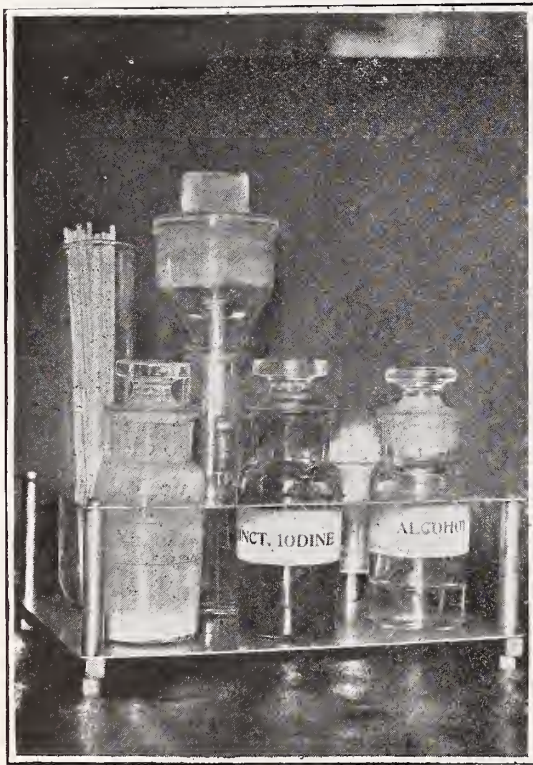
for in the average sized buttocks. The areas of injection should be two inches apart, each way, varying this chart as the general area indicates. In the female the area is so much larger than in the male that the injections can be more widely spaced than two inches. A record card of the areas injected, the size of the dose and the date upon which it was given should be carefully kept, for



one cannot always be guided by the puncture of the last injection, if the injections are given many days apart, and, furthermore, one cannot trust his or the patient's memory in regard to the area of the last injection.

Much study and research have been carried on in disinfecting the skin, and it is still an unsettled question just how much is accomplished by the recommended means for rendering the skin less septic. The method employed is that of applying pure alcohol to the area

to be injected, with friction, then paint an area the size of a quarter of a dollar with tincture of iodine, give the injection, or make the puncture, through the area stained by the iodine. Tincture of green soap may be used before the alcohol, yet I do not deem it of much assistance. The penetrating power of the tincture of iodine into the epithelial layer and its mild antiseptic properties are of more value than anything thus



applying the alcohol and the tincture of iodine. The most important article in the set is the specially constructed ground glass stopper bottle in which the needle and a portion of the syringe are suspended in a 1:20 carbolic solution. The sixth article is the bottle containing a solution of mercury. I am employing a 10 per cent. solution of salicylate of mercury, a suspension in liquid albolene as an insoluble salt, and the iodide of mercury as a soluble salt. In all of my intra-muscular injections, whether it be soluble or insoluble salt, I am administering 1, 2 and 4 per cent. of chloretone, to control the burning sensation directly following the injection. This suspension is sterilized and kept in a ground-glass stoppered bottle. It is important that this bottle be round, so that the suspension can be readily shaken into an even emulsion before it is drawn into the syringe. This tray is compact and can easily be conveyed about without fear of breakage or of contaminating the articles which are necessary for the successful administration of mercury. The syringe to be used can be the ordinary instrument with a graduated piston. The objection to this syringe is that one cannot see the contents of the barrel as with the glass barrel, and it is sure to corrode in a very short time, from the mercury, which will render it useless.

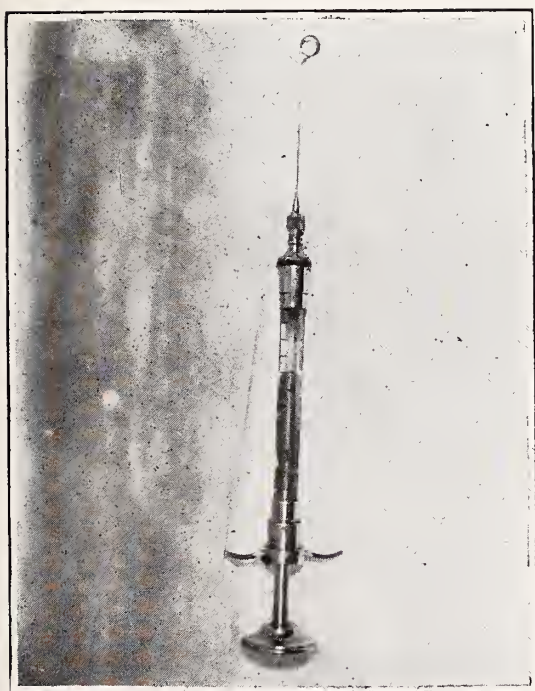
The Gottheil syringe shown in the cut is much to be preferred over the ordinary hypodermic syringe. Its advantages are that of a graduated glass barrel, equipped with a large area on the end of the piston for the thumb pressure, as well as larger braces for the fingers, the advantages of which are readily recognized. The needles are fitted on rather than threaded, so that disconnection of the needle after insertion is more readily and quickly accomplished than if the needle had to be unscrewed. The needles employed must be of at least three lengths in order to success-

far recommended. This technic has been most extensively employed in the use of bacterial suspension in the past three years.

In the photograph are shown the articles which are needed for ready use in the administration of mercury by this method, viz:—a cotton container and wooden applicators which are used for



fully place the injection into the muscles of every case. The amount of fat differs greatly in different patients, and one can readily see the importance of the varying lengths of the needle in order to place the injected material in the proper tissue. One can readily determine the depth or thickness of the fat by pinching the tissue between the fin-



gers and then estimate as to the length of the needle to be employed in this case. The length of the needle should be  $1\frac{3}{4}$  in., 2 in. and  $2\frac{1}{2}$  in., and of large enough calibre to readily pull through it the insoluble salt if it is to be employed. The needle must at all times be sharp, for it is the dull needle that causes pain and discomfort to the patient. Needles, frequently used, as well as those used less frequently, will become dull, most often from striking the point of the needle, or from corrosion. With a dead flat, fine file, one can quickly sharpen

such a needle, perhaps sharper than it was originally, and with a sharp needle it is often impossible for the patient to tell when it penetrates the skin. With oil suspensions of the mercury, the needle is well lubricated, which assists also an easy entrance.

Some little minor points in the operation itself should be kept in mind other than those mentioned. The patient should lie upon the left side, with the gluteal muscles well relaxed. Hold the syringe firmly in the right hand and with the left hand put the skin of the area to be punctured on the stretch. With a quick thrust put the needle through the skin, by so doing, the sensory nerve is passed with but little sensation. Once through the skin, there is practically no sensation produced by the needle. The needle can be inserted into the deeper structures more slowly, and if it be slightly slanted, so as to go under the muscle fibres rather than directly through the fibres, they will act as a valve, preventing the injected fluids from following the needle when it is withdrawn. When the depth to which the injection is to be given is reached, the needle is disconnected to ascertain whether a blood vessel has been entered. If this occurs, it is best to withdraw the needle and select a new area. I still feel that one is less likely to get an embolus by so doing than by injecting when blood is well up into the needle, presenting enough force to empty the syringe of the solution with which it is filled. The injected solution should be warm and injected slowly, and before withdrawing the needle, the tissues should be grasped about the needle and held firmly, so as to prevent any mercury following the needle out into the skin.

A change of position of the patient, so as to slightly put the muscles on the stretch, will also assist in preventing mercury from following the needle as it



is withdrawn. When mercury follows the needle into the skin or connective tissue, a very sensitive area is the result, lasting several days, as well as an indurated nodule, which is but slowly carried away. Directly the needle is withdrawn, give the area injected a quick, rotary massage with a cotton pledget of alcohol. This massage assists in disseminating the injected fluid, before it has caused much coagulation

of albumen. It is well to instruct the patient to keep all prolonged pressures from the area injected for the first twenty-four hours, thus preventing pressure anemia, which is another precaution against necrosis of the injected area.

Careful attention to these details is productive of success in this method of treatment, which is the method par excellence in many of the severe types of syphilis.

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## WILLIAM BEAUMONT AND HIS WORK IN THE LIGHT OF MODERN RESEARCH\*

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BURTON R. CORBUS, B.S., M.D.,  
Grand Rapids.

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It is with no small degree of hesitancy that I present to you tonight, one whose story has been told, whose character has been delineated, whose life work has been extolled by many men far abler than I, possessing far more facile pens, and much larger opportunities. My temerity is due in part to the personal interest which I feel in one who is truly the father of that branch of medicine in which I am especially interested; but more to the belief that the Grand Rapids Academy of Medicine has neglected a field prolific in incentive factors. It is well for us to have frequently brought before us the lives and personalities of those men who, with high aims and large ambitions, have, as Doctor Osler so aptly puts it, "attained that honor which can only come when the man and the opportunity meet—and match."

We need to become better acquainted with such men, to know of their sacrifices, their deprivations, their failures

and their successes attained in spite of limited opportunities and few advantages, that we may find therein, the incentive for better work and that ambition which shall lead even the least of us to desire to add a something to the sum of human knowledge.

With this purpose in view, I feel that I could choose no better subject than this man, who, in our own state, found and matched his opportunity.

Michigan has frequently presented to the scientific world through her trained scientists, her indefatigable workers, advances and discoveries in medicine and its branches of truly incalculable value, but no one man has added such a sum total to knowledge, with an exactness which eighty years of patient, persistent observations have, in the main, but served to verify, as has this man whom the profession of Michigan delight to honor.

I present to you, William S. Beaumont, one-time post surgeon of Fort Mackinac, Michigan Territory, the father

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\*Read before the Grand Rapids Academy of Medicine, April 7, 1909.

of American physiologists, the value of whose work is as unquestioned today as when, in 1833, appeared this appreciation in the American Journal of the Medical Sciences:

"The report of his (Dr. Beaumont's) experiments and observations constitutes unquestionably in many particulars, the most important work ever published on the physiology of digestion."

William Beaumont was born at Lebanon, Connecticut, in 1875. His education was certainly limited. About all that is known is that he was considered capable of teaching school, a profession which he followed for a year or two, during which time he began the study of medicine. "There is no evidence, so far as I can find," says Vaughan, "that he ever attended a medical college." It would seem that the extent of his medical training was limited to about two years in the office of a Doctor Chandler. Entering the United States Army as assistant surgeon, he saw a not inconsiderable amount of service in the ten years immediately preceding the beginning of that work on which his fame rests. As indicative of this I quote from his journal of April 27, 1813.

The British on evacuating the garrison had caused their magazine to be exploded, injuring three hundred and killing sixty. He says in part:

"A most distressing scene ensues in the hospital. Nothing is heard but the agonizing groans and supplications of the wounded and dying. The surgeons wade in blood cutting off arms and legs and trepanning heads.....My deepest sympathies were aroused—I cut and slashed for thirty-six hours without food or sleep."

Again on April 29:

"Dressed upwards of fifty patients—from simple contusions to the worst of compound fractures—more than half the latter. Performed two cases of amputation and one of trepanning. At twelve P. M. retired to rest my fatigued body and mind."

In 1832, while stationed at Michillimackinac, now Mackinac Island, came the opportunity with which you are all familiar, and for which, unknowingly, he had been preparing himself, for I cannot believe that he had not been interested in physiological work prior to this time. We know that at the time of his experimental work he was thoroughly familiar with the literature of the day bearing on the subject, and it would seem that a certain familiarity with the literature and a certain fondness for the subject, must have been present to act as an incentive for the undertaking of these investigations. Other men had had like opportunities and failed to grasp them. Alexis St. Martin was not the first case of permanent gastric fistula; Barrows, of the Royal Irish Academy, relates such a case; Louis refers to cases which occurred to Foubert and Covillard; Helm, of Vienna, reports another case, and one occurred at the La Charite in Paris. Not one of these cases occurring in what were then the centers for scientific medical study and research, were utilized in any beneficial manner.

On June 6, 1822, Alexis St. Martin was accidentally wounded by the discharge of a musket. According to Beaumont:

"The charge consisting of powder and duck shot was received in the left side of the youth, he being at a distance of not more than one yard from the muzzle of the gun. The contents entered posteriorly, and in an oblique direction, forward and inward, literally blowing off integuments and muscles of the size of a man's hand, fracturing and carrying away the anterior half of the sixth rib, fracturing the fifth, lacerating the lower portion of the left lobe of the lungs, the diaphragm, and perforating the stomach.

The whole mass of materials forced from the musket, together with fragments of clothing and pieces of fractured ribs, were driven into the muscles and cavity of the chest.

I saw him in twenty-five or thirty minutes after the accident occurred, and, on examination, found a portion of the lung, as large as a turkey's egg, protruding through the external wound, lac-

erated and burnt; and immediately below this, another protrusion, which on further examination, proved to be a portion of the stomach, lacerated through all its coats, and pouring out the food he had taken for his breakfast, through an orifice large enough to admit the forefinger."<sup>1</sup>

The wound was carefully treated according to the methods then in vogue, apparently consisting largely of carbonated fermentative poultices. In the course of healing, sloughing of the injured portions of the lung occurred, and in the months succeeding, there came away at various times portions of the costal cartilages. In the final healing there was left,

"A small fold or doubling of the coats of the stomach, forming at the superior margin of the orifice, slightly protruding and increasing until it filled the aperture so as to supersede the necessity for the compress and bandage for retaining the contents of the stomach. This valvular formation adapted itself to the accidental orifice, so as completely to prevent the efflux of the gastric contents when the stomach was full, but was easily depressed with the forefinger."

It was through this window that the observations were made.

The experiments commenced in 1825, and were continued with interruptions until 1833. Evidently St. Martin, grateful to the man who had unquestionably saved his life, who had taken him into his family and cared for and treated him when the authorities would have sent him back to Canada as a common pauper, aided the Doctor in his investigations and willingly submitted to the pain and unpleasantness incident thereto. Later, however, his appreciation and gratitude became less intense. At one time, he took French-leave of his benefactor, and it was only with much solicitation and pecuniary sacrifice on the doctor's part that he prevailed upon him to return for the later experiments. Thereafter, to the great disappointment

of Beaumont, no persuasion was successful in inducing him to return, though many and frequent were the attempts that were made.

In a letter to his cousin, written some years afterward, Beaumont says, in regard to the "old fistulous Alexis":

"I must have him at all hazards, and obtain the necessary assistance to my individual and private efforts, or transfer him to some competent and scientific institution for a thorough investigation and report. I must retrieve my past ignorance, imbecility and professional remissness of a quarter of a century or more by double diligence, intense study and untiring application of soul and body to the subject before I die."

Before discussing the experiments and observations, I want to quote a paragraph contained in the preface of the first edition of his "Gastric Juice and Physiology of Digestion":

"I had opportunities for the examination of the interior of the stomach and of its secretions, which has never before been so fully offered to any one. This most important organ, its secretions and its operations, have been submitted to my observation in a very extraordinary manner, in a state of perfect health, and for years in succession, I have availed myself of the opportunity afforded by a concurrence of circumstances which probably can never again occur, with a zeal and perseverance proceeding from motives of which my conscience approves....."

I submit a body of facts which cannot be invalidated. My opinions may be doubted, denied, or approved, according as they conflict or agree with the opinions of each individual who may read them, but their worth will be best determined by the foundation on which they rest—the incontrovertible facts."

And again, later in his work:

"Truth like beauty is when 'unadorned adorned the most,' and in prosecuting these experiments and inquiries, I believe I have been guided by its light."

It is not surprising that observations undertaken with such a spirit should produce a work justly considered a

<sup>1</sup>Cited by Vaughan, "Beaumont and His Work." *Physician & Surgeon, Del.*, 1902.



classic. With such ideals, it is not strange that for the most part his contemporaries were impressed by the accuracy and truthfulness of his observations and were not slow in accepting his book, and willing to give him his due credit.

Doctor Combe, probably the leading English physiologist of his day, says in his work on the *Physiology of Digestion*":

Doctor Beaumont ..... pursued his inquiries with a zeal, perseverance and disinterestedness highly creditable to his character both as a man and as a philosopher,"..... and again: "From the excellent judgment with which he carried on his investigations, and the scrupulous care with which he announces his results and separates facts from theory, it is impossible not to place great confidence both in his personal qualifications as an observer and in the general accuracy of his statements."

In the last few years Pawlow and Chigin, Cannon and Starling have, as the result of most laborious experiments and observations on animals, made most valuable contributions to the physiology of digestion, and as we read their experiments and their observations, more and more, are we impressed with the fact that Beaumont in his observations and his interpretations, did but anticipate in the largest measure, these findings. Fully appreciating that errors in his interpretations have been determined, that marked advancement along individual lines have been made, yet, the largest amount of work and the greatest number of experiments have resulted in simply a confirmation of findings made by an untrained scientist in the Michigan woods.

I desire to take up a few of these conclusions of Beaumont, comparing them with the advanced knowledge of today. One must not forget in analyzing these experiments; that the knowledge of the physiology of digestion at this time was in a most chaotic state. Physiologists had barely gotten beyond the theories

of putrefaction, trituration, maceration and fermentation, although the more advanced physiologists of the day, were "in favor of the existence of pretty active chemical agents in the gastric fluids," and Prout, 1824, Tiedemann and Gmelin were insisting that this chemical agent was hydrochloric acid.

#### *1st. The Movement of the Stomach.*

Cannon's studies along this line have been most exhaustive, and should be truly classed among the most valuable contributions of recent years. In his experiments on animals, he relied on the use of X-ray, following the feeding of a bismuth meal. <sup>1</sup>Within five minutes after a meal of bread, a slight annular constriction appears near the duodenal end of the antrum and moves peristaltically towards the pylorus. This is followed by several other waves of similar character. Two or three minutes after the first movement is seen, very slight constrictions appear near the middle of the stomach (the preantral part) and becoming deeper move slowly toward the pylorus. As digestion goes on, the antrum becomes somewhat elongated and the constrictions somewhat deeper, but never until the stomach is nearly empty do they divide the cavity entirely.

Every constriction wave does not force food through the pylorus, for the majority of waves, it might almost be said the pylorus remains closed. Under these circumstances the food is forced into the blind extremity of the antrum. When this occurs a part at least of the food which is being pressed upon, is forced backward through the constriction toward the cardiac end of the stomach.

Now listen to Beaumont:

"All these facts (referring to his experimental observations, taken together, will, I think, rationally admit of the following explanation. The longitudinal muscles of the whole stomach, with the assistance of the transverse ones of the

<sup>1</sup>From *Physiology of Alimentation*, Martin Fischer.

splenic and central portions carry the contents into the pyloric extremity. The circular or transverse muscles contract progressively, from left to right. When the impulse arrives at the transverse band, which is described as situated near the commencement of the more conical shaped part of the pyloric extremity, three or four inches from the small end, it is excited to a more forcible contraction, and, closing upon the alimentary matter and fluids, contained in the pyloric end, prevents their regurgitation. The muscles of the pyloric end, now contracting upon the contents detained there, separate and expel some portion of the chyme. It appears that the crude food excited the contractile power of the pylorus, so as to prevent its passage into the duodenum, while the thinner, chymified portion is pressed through the valve, into the intestine. After the contractile impulse is carried to the pyloric extremity, the circular band, and all the transverse muscles, become relaxed, and a contraction, commences in a reversed direction, from right to left, and carries the contents again to the splenic extremity, to undergo similar revolutions.

It would appear, then, that the discharge of the chyme, from the stomach, is effected by mechanical impulse. But, I confess, I do not like to give an opinion. The idea of mechanical force, I admit, is liable to objection; but, perhaps, not more so than that of the selecting power of the pylorus. Whatever bias I may have in favor of the former method, has been forced upon me by the deductions of experiment and observation."

It is exceedingly interesting to note in his conclusions here, as in all his observations, the evidence of that truly wonderful philosophical mind which sees beyond the confines of his immediate observations, yet refrains from assigning causes which are at this time unprovable. We now know, as you are all aware, that there are two factors concerned in the opening and closing of the pylorus. The pylorus opens whenever free hydrochloric acid of sufficient concentration is present in the stomach. The opening of the pylorus allows the escape of a part of the acid stomach contents into the duodenum. As soon as the acid comes in contact with this

portion of the intestinal tract, however, the pylorus is made to close and remains closed until the acid in the duodenum is neutralized through the flow of the pancreatic juice and bile into this portion of the gut. As the acid in the duodenum becomes neutralized, the stimulus to the closure of the pylorus is weakened until the acid in the stomach once more opens the sphincter. Another portion of food in consequence escapes from the stomach, the pylorus closes once more, and the cycle is repeated.

## 2nd. *The Gastric Juice.*

The observations of Pawlow and his co-workers comprise the most brilliant contributions in gastric digestion in recent years. These observations you will remember were made on dogs by means of an artificial pouch, the opening of which is attached to the abdominal wall, while the base is still connected with the main cavity of the stomach, but separated therefrom by a partition of mucous membrane. This miniature stomach gives a true picture of the secretory activity of the large one without interference by the admixture of food.

Further observation, you will also remember, were made by the method of "sham feeding." This consists in feeding a dog in which the oesophagus has been separated in such a way that the food never enters the stomach.

Some of Pawlow's conclusions are:

A. That the secretions of gastric juice is dependent upon the taking of the food. The stomach of the fasting animal is entirely empty.

I read you Beaumont's experiments along this line:

"No. 18. March 8. At 8 o'clock A. M.—Stomach empty—extracted one and a half ounce of gastric juice.

No. 19. March 12. At 9 o'clock A. M.—Stomach empty—extracted one and a half ounces of gastric juice.

Jan. 26. Experiment No. 73. At 9 o'clock,

he breakfasted on sausage, bread and coffee. 10 o'clock. Th. :34. Temperature of the stomach, 100¾, and full of a heterogenous fluid. 12 o'clock, N., returned from a walk. Stomach empty—temperature, 101 and a fraction. Weather clear and pleasant. Th.: 39. Wind N.W. and moderate."

Listen to his conclusions:

"It would seem from the preceding experiments that the stomach contained *no gastric juice* in a free state, when aliment is not present. Any digestible or irritating substance when applied to the internal coat excites the action of the gastric vessels. Hence I infer that the fluid in these experiments was incited to discharge itself by the irritation of the tube used in extracting it. And again:

"From this and other experiments, it may be clearly inferred, that in the most natural and healthy states of the stomach, there are little or no fluids, of any kind, in the gastric cavity, until excited by aliment or other irritants; and that digestion under this condition, is the most rapidly and perfectly performed."

You note that there is a slight degree of error in Beaumont's observation according to Pawlow's experiments. Today we recognize that no mechanical stimulant is effective in bringing about a secretion of gastric juice, even in the slight degree found by Beaumont and that he obtained any acid secretion at all is probably due to errors in his experiment. Like errors in animal experiments being explained "by not waiting until stimulation from the previous meal had ceased—by psychic secretion from exciting the dog by the smell of food on hands," etc.

B. (Pawlow's observation.) That the gastric secretion is not all poured out at once upon the food, but continues as long as the food remains in the stomach.

On account of length, I cannot quote experiment No. 31, but here are Beaumont's conclusion.

"This I think is an evidence that the fluid is discharged into the stomach gradually and pro-

gressively according to the requirements of the aliment."

C. That emotional depressions influence the secretions. I read you experiment No. 32:

"March 12. At 8 o'clock A. M., extracted one ounce of gastric juice.

At 9 o'clock, he breakfasted on fat pork, bread and potatoes. One hour afterwards, examined contents of stomach—found a heterogenous mixture, resembling thick porridge.

At 1 o'clock P. M.—four hours after having eaten—took out a portion, in a complete chymous state, without any entire particles of food to be seen. It was of a milky, or rather thin, gruel-like consistency, and considerably tinged with yellow bile; a circumstance which I had but once before observed in my experiments upon him. And this I supposed to have been the effect of violent anger, which occurred about the time of taking out this parcel.

Beaumont says, "This experiment shows the effect of violent passion on the digestive apparatus. The presence of bile, in this instance, was believed to be the effect of anger. In a healthy state of the stomach, and an equable frame of mind, this substance has seldom been found in the stomach. When so found, except under peculiar circumstances of diet, it may generally be regarded as an indication of either mental or corporeal disease; and may be considered a foreign and offending substance in that organ."

It was not given to Beaumont to go farther in a determination of the connection between the central nervous system and the stomach, and it remained for Pawlow and his co-workers to determine through the device of "sham feeding" that the vagus nerve markedly influences the secretion of the gastric juice. The excitant of the vagus being purely psychical—in other words the appetite. The gastric juice so secreted Pawlow calls the "appetite juice," and he proves that the more eagerly a dog eats, the greater the amount of juice, and the higher the digestive power.

Food introduced into the stomach directly, will, of course, stimulate the secretion of digestive juices—but the



process will be delayed and the flow will be poorer both in quantity and quality.

The limited chemical knowledge of the day did not permit of the determination of the ferments of the gastric juice and the discovery of pepsin was left to Schwann at a somewhat later date, but here again is shown the wonderful foresight of Beaumont, and he concludes, "That it (gastric juice) contains free muriatic acid and *some other active chemical principles.*"

One is tempted to continue these comparisons far beyond the legitimate confines of such a paper as this—with ever increasing respect for the man who could, through two hundred and thirty-eight experiments and observations show such devotion to science, such consistent desire for truth and accuracy.

At the end of his book Beaumont adds some pages of "Inferences"—many of which have become the truisms of

today. In concluding I cannot refrain from quoting a few of these:

That the quantity of food generally taken, is more than the wants of the system require; and that such excess, if persevered in, generally produces, not only functional aberration, but disease of the coats of the stomach.

That bulk, as well as nutriment, is necessary to the articles of diet.

That oily food is difficult of digestion, though it contains a large proportion of the nutrient principles.

That the time required for the digestion of food is various, depending upon the quantity and the quality of the food, state of the stomach, etc., but that the time ordinarily required for the disposal of a moderate meal of the fibrous parts of meat, with bread, etc., is from three to three and a half hours.

That solid food, of a certain texture, is easier of digestion, than fluid.

That stimulating condiments are injurious to of the coats of the stomach.

That the use of ardent spirits always produces disease of the stomach, if persevered in.

### The First Thermometer.

According to the Abbé Nollett, the first thermometer was invented by a peasant named Drebbel, of North Holland. Drebbel's thermometer was composed of a vertical glass tube, ending at the top in a bulb, while the lower end was plunged in a vessel filled with water, or some colored fluid. When the bulb warmed the expanded air within drove back the water. When the air cooled again the external pressure caused the liquid to rise again in the tube. The members of the *accademia del Cimento* soon substituted for this hardly practical apparatus the more convenient instrument we still use.—*Health.*

The diagnosis of tuberculosis and cancer will make better progress when family history is utterly ignored.—*American Journal of Surgery.*

When gas comes from an abscess which has been opened in some part of the abdomen, it must not be hastily assumed that the bowel is involved, as many of the abdominal suppurations are associated with gas-forming bacteria. This is notably the case with subphrenic abscesses.—*American Journal of Surgery.*

Avoid touching the cornea during the administration of an anesthetic. The ocular reflex can be obtained just as well through the lids, and the pupils and motions of the globe offer the most definite indications of the degree of narcosis.—*Am. Jour. Surg.*

Patients who show a progressive loss of vocal power should be examined most carefully for an intralaryngeal condition. An acute aphonia may be due to an inflammatory condition or paresis of one cord; alcoholism, syphilis, tuberculosis and malignant disease bring on a chronic condition. Two most important causes of chronic laryngitis are thickening due to an old inflammatory process and the presence of a small, hard, nodular tumor on one of the cords, e. g., fibroma.—*American Journal of Surgery.*

## THE SPECIALIST AND THE GENERAL PRACTITIONER\*

FRANK B. TIBBALS, M.D.,

Detroit.

As a physician of nearly twenty years' standing, I have noted with interest the gradual trend toward specialism on the part of both the profession and the laity, particularly in urban communities. The genus family physician in cities is almost extinct, and in another generation or two may be classed with the ichthyosaurus, the mastodon, and the buffalo, as relics of a by-gone age.

The freshman in medicine now selects his specialty, ignoring or neglecting general medicine as much as possible before graduation, then, after a year or so of hospital training, with both eyes still on his own pet organ, enters upon the actual practice of medicine in his self-chosen narrow field. Hence it has come about that the human body is subdivided medically, into many parts, each under the care of a specialist, and the individual desiring health and vigor places himself under the care of a constellation of stars, instead of in the hands of his family physician as in former days.

As is well known, a specialist is one "who *limits* his practice to certain specified diseases, or to the diseases of a single organ or class."\* The endeavor to subdivide the body into various parts, each belonging therapeutically to its specialist has been attended by some difficulty, inasmuch as the anatomical and physiological lines of demarkation are indefinite. Hence distinctions have arisen in the attempt to define these limited fields which are almost amusing.

Perhaps the first specialty to develop was that of the eye and ear, though why

two organs having anatomically and functionally so little in common, should be classed together is not clear. The relations of the heart and stomach are closer and more interdependent, and they are also close neighbors. The gynecologist chose as his field the diseases peculiar to women, which has been extended by some well known men to include obstetrics and circumcision of the male child. Ultimately this specialty, nominally bounded by sex lines, reached out to include abdominal surgery in both sexes, a rather frank confession of the inadequacy of the arbitrary limitation. The dermatologist has selected as his field lesions of the skin, but includes syphilis. Why not as well include scarlatina and smallpox, which are also constitutional diseases having dermatological lesions? The gastro-enterologist has as his field diseases of the gastro-intestinal tract, but is expected to, and often does treat medically anything between the diaphragm and Poupart's ligament.

The proctologist, whose field was originally the rectum, now includes from below upwards the entire alimentary tract, and might be more fitly termed the surgical gastro-enterologist.

The genito-urinary specialist has both sexes in his clientele and his unselfish disposition is demonstrated by his failure to include operative gynecology and obstetrics in his field, where they rightly belong according to his selected title.

I have mentioned but a few of these special fields which in the present developmental state include almost every special organ of the body and hence all dis-

\*Read before the Lenawee County Medical Society, March 9, 1909.

\*Gould's Dictionary of Medicine.

eases affecting special organs.

Diphtheria certainly belongs to the throat man, pneumonia, tuberculosis and heart diseases to the chest man; typhoid to the gastro-enterologist, and so forth *ad infinitum*. So far as I can ascertain the only things rightly belonging to the general practitioner are acute colds before coryza or bronchitis develop, perhaps muscular rheumatism if interference with gastro-intestinal metabolism cannot be clearly proven, and chilblains, although this is in doubt, the weight of authority leaning toward classing, chilblains as dermatological lesions. The thyroid and the lymphatic system have thus far evaded discovery, but doubtless will soon be taken by ambitious young men who find the other specialties overcrowded. I know a man who is now advertising his specialty somewhat, directly to the laity. He limits his practice strictly to running sores and ulcers of the leg. His cards bear his photograph and the war cry, "I heal sore legs." He is one of the real specialists in his city, in that he limits his practice absolutely to his chosen field.

In a way we are all specialists now in city practice, if not strictly so in the true meaning of the word—at least general specialists. Of specialists there are two kinds, the cultivated or highly fertilized type, making a more or less honest effort to conform to the limitations of the field chosen, and the common or garden variety, which is a specialist to the laity and a general practitioner to the profession. The true specialist is a man who after long experience in general practice has found himself with more love and more fitness for certain things and decides to limit his work to those special lines. He thus acquires special facility in diagnosis and special ability in treatment, and becomes the ideal consultant. The profession, however, has a right to expect that he will limit his work to his specialty and not

use the reputation thus acquired to draw general business.

The young graduate who adopts a specialty upon entering practice is somewhat of a machine-made specialist, having about the same knowledge of general medicine as the automobile expert who knows everything about carburetors, but little or nothing about automobiles.

The common or garden variety of pseudo-specialist is at present a weed capable by cultivation, perhaps, of development into a useful plant, but occupying ground more properly belonging to flora of more value to the human race.

The inquiry is very pertinent, whether either the profession or the public benefits by medical specialism in its present development? The tendency to accept specialists just out of college is undoubtedly a bad thing for the public. The tendency to assume the title without conforming to its obligations is undoubtedly bad for the profession, and the tendency of the public to regard specialism as the fountain head of all medical wisdom is equally bad for both the public and the profession.

The passing of the family physician, as a trusted adviser, is much to be regretted, for the layman without medical knowledge is unable to choose wisely the best specialist for his self-diagnosed malady, or even to decide intelligently whether he needs the services of a specialist at all. Nevertheless he prescribes a specialist for himself, much as he often prescribes drugs for himself, on the advice of an equally ignorant friend or neighbor, and any man with any reputation as a specialist finds much business coming direct to him which is in no way referred by the family physician.

It is a debatable question whether the human body, which is a complex organism of many intimately correlated and mutually interdependent parts, can be advantageously subdivided to provide for



the many specialties which are now in vogue.

How is it possible to isolate one organ, for example the eye or the stomach, from the rest of the body, with which it is anatomically and functionally connected, and treat the organ by itself, except for pathological lesions which are entirely local? The oculist may be treating diseases of the eye in correcting errors of refraction, but in treating ocular conditions due to syphilis or to arterio-sclerosis he is practicing general medicine.

The stomach specialist is within his field when treating dietetic or digestive errors, but when the disturbance of function is due to ocular, uterine, or renal abnormalities, he must practice general medicine to relieve his patient.

If it be true, then, that even the specialist himself cannot isolate his own organ, except at times, the very term itself is a misnomer, since it designates a physician who limits his practice to diseases of a single organ or class.

Would it not be infinitely better if the specialist were to take the honorary title and occupy the field rightly belonging to him, that of consultant?

The field of medicine is broad and offers ample opportunity for the man of experience, who may wish to do much of certain kinds of work and little of others, and his evolution into a practitioner who refuses some kinds of practice and devotes special attention to others is a perfectly natural one, for, as the result of special study and large experience, one may develop particular expertness along certain lines of practice, and thus become the man to whom others, less expert, naturally turn for assistance in diagnosis and treatment.

Especially is this true of the more delicate operations in surgery and in the use of diagnostic instruments, such as the ophthalmoscope, the laryngeal mirror, the stethoscope, or cystoscope.

There are no secrets in regular medicine and every advance the world over soon becomes the property of the entire profession. The growth of the specialties has added much to the sum total of professional knowledge. The dangers of mastoid disease, or appendicitis, or of beginning malignant disease are appreciated by the mass of the profession, as they would not have been but for the constant driving home of the facts by the specialists. And yet the specialist has nothing in his armamentarium but what study, experience, and a perfected technique will bring to every practitioner.

It is often urged that the field of medicine is so large that one mind can only grasp a part of it successfully. Hence, we are told, surgery must be divided into several dozen fields and medicine as well.

To a good anatomist with normal eyesight and nimble fingers, the technique of surgery is the easiest thing in medicine. However, it requires much practice to become a rapid, skillful, operator, and brains will always differentiate the surgeon from the cutter. Why, then, should the surgeon tie the carotid and leave adenoids for the throat man, tap an abdominal but not a pleural effusion, remove a spleen but not a uterus?

Equally true is it in the field of medicine that if the practitioner is fitted to practice at all, he is competent to cover the field in the treatment of the pathological conditions of the various interdependent organs of the body, supplementing his own diagnostic and therapeutic skill by the assistance and counsel of the expert.

There are but two natural subdivisions of medical practice—surgery and medicine.

The man doing all kinds of work cannot do surgery as well as the surgeon who does little else and the converse is equally true.

The fact that the general practitioner

often tries to do major surgery is only indicative of his desire to make an honest living.

The specialist is sometimes accustomed to consider a special case as his own during the entire period of convalescence, and also thereafter, hence the general practitioner is inclined to avoid consultation with a specialist, fearing the loss of his prestige and perhaps his patient, instead of welcoming the assistance of expert advice, as he should.

That a problem exists in the subject matter here laid before you, of vital importance to the future of medicine, most thinking men will agree. That its solution will come naturally within the next quarter century is the belief of the writer. Its solution lies in the gradual development of the medical school and the medical student now under way. The proprietary medical school is rapidly passing and with it goes the illiterate student. A college graduate presents a soil fertile for the implantation of a medical education far superior to that offered by the man fresh from the plow or the bench.

With the improvement in quality of the medical graduate will come diminution in quantity, because the added expense of the good education to be required by state examining boards will deter many men, of the type that formerly studied medicine, from entering the profession.

Only the incompetency of many members of the profession for other than routine practice ever allowed specialism to develop in its present manifold forms.

The broadly educated and well taught physician of the next generation will be able to do for his patient practically all

that a dozen specialists do for him today, and the specialist will find himself filling the field which he ought to occupy, that of the consulting expert.

In communities such as yours, you do not find your patients floating from specialist to specialist to find something which was lacking in you. Why? Because for one reason they lack the stimulus of custom in the fad-chasing habit, and also because in the main you are better all round practitioners than the city men. You have supplemented the possible deficiencies of your medical training by the stern necessity of self-reliance in many emergencies.

You maintain the health of your community, trusted by your clientele as we are not, since you are not expected to furnish them the latest medical fashions as are we. You have some men who excel in certain things and utilize them to assist you in difficult cases. They are consultants, not specialists.

You may send your major surgery and perhaps your eye, ear, nose and throat work to the city, but all other conditions you treat yourselves with the occasional aid of a consultation in some unusual or obscure case.

Statistics show that neither longevity, health, nor happiness are lessened by life in rural communities, hence it seems a fair inference that much of the modern medical faddism existing in cities is not really essential to physical well being.

You typify, then, the ideal medical conditions of the, I hope, not too distant future, when all well trained and experienced practitioners will be adjudged competent, and *will* be competent, to treat most pathological conditions occurring in the families entrusted to their care.

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The prognosis in tuberculous diseases of bones and joints in children has been improved more by the practical application of the fresh air treatment than by any other means. The next step in

surgical enlightenment is to apply the same treatment to other surgical disease.—*American Journal of Surgery.*

## The Journal of the Michigan State Medical Society

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to B. R. Schenck, M. D., Editor, 502 Washington Arcade, Detroit, Mich.

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SEPTEMBER

### Editorial

TO US AS PHYSICIANS THE FIRST OF OUR AIMS MUST BE OUR DUTY TO THE SICK. TO LOSE NO OPPORTUNITY TO IMPROVE OUR KNOWLEDGE AND OUR METHODS; TO ADHERE TO THIS AIM AND STEADFASTLY REFUSE TO BE LED ASTRAY AFTER LESS PRESSING DUTIES, OR TO BE TANGLED IN ANY OF THE MANY SIDE-PATHS OPENING ALLURINGLY BEFORE OUR FEET—IS TO WIN THE HIGHEST SUCCESS ATTAINABLE BY US, AND TO FULFIL BEST THE TRUE OBJECT OF OUR EXISTENCE. MAY WE ALL FIND THAT, AS WITH SOLOMON, THE CHOICE OF WISDOM BRINGS WITH IT THE POSSESSION OF ALL OTHER GOOD THINGS.—*American Journal of Clinical Medicine.*



**Lodge practice is one of the economic questions** which should interest every active practitioner, for it is undoubtedly on the increase in America, and the time will soon come when it must be intelligently discussed and active measures taken to curb it. Already, in certain sections of the country, it has become of the greatest practical moment to the

practitioners; it has ceased to be merely an academic question; it menaces the standing of the profession and decreases their individual and average income.

The American Academy of Medicine, at its last meeting, held a symposium on contract practice and discussed nearly every phase of the topic. A very full abstract of the discussion appears in the *Journal of the American Medical Association*, for August 7th, and should be read by every interested member of our society, meaning every member who has the good of the profession at heart, whether or not he may be individually affected by the evil. As Doctor Benedict of Buffalo said in this discussion, the ethical and economic evils involved are not intrinsic but circumstantial, the trouble largely being that the recompense is not always calculated at an adequate rate to provide competent care. There are certain forms of so-called contract work, such as that in force at mines, in lumber camps and for railroads, which are necessary, entirely unobjectionable and wholly without the scope of this discussion. The physicians engaged in these forms may well be classed with those holding any salaried position, such as the directors of insurance companies or the members of the staff of the various state institutions. This sort of work is vastly different from that of lodge and sick benefit contract work, and in any discussion of the subject, a sharp distinction between the two should be made.

It is the growing evil of lodge practice, "the buying of our services at wholesale and the selling of them at retail," some laymen pocketing the profits, which must be, in the near future, thoroughly discussed and fought out to a finish. In this discussion the point made, or to be made by Doctor Warthin in his paper at Kalamazoo (see abstract), must be taken into consideration. He will point out that the practice of medicine is gradually undergoing a change, that



an evolution is occurring whereby the prevention of disease is taking the place of the curing of disease. In this connection Doctor Benedict says that "from an economic standpoint the interests of the average physician require some change from the present narrow method of rendering service to the laity and attempting the broader function of adviser to the community." This phase of the question, however, borders on the academic; practically, we cannot escape the conclusion that not only is the doctor's income being lessened by the splendid results thus far obtained in preventive medicine, but it also suffers, in some communities at least, from the pernicious and growing evil of lodge practice.

If a physician had a contract with a lodge by which he was paid for each case the customary and regular fees obtained by his competitors, he might be taking an unfair advantage of his colleagues, but, nevertheless, the basic principle on which the objection to contract work is made, i. e. the cheapening of service and the temptation to do careless and indifferent work, to the detriment and shame of the whole profession—would not be violated and little argument could be brought up against it. But are there any such contracts? We have, rather, the spectacle of a doctor accepting \$1.00 or \$1.50, more or less, from each member and agreeing to attend him for a year, the doctor receiving in some instances an average fee of seven and one-half cents a visit for his year's work. What kind of service can he give? What kind of equipment can he keep up? What kind of books can he read? What kind of an impression can he leave with the laity as to medical men and medical things generally?

What are we to do about it? At every meeting of the state society there should be an hour set aside to discuss matters of this kind; in every county society, one meeting a year ought to be given up

to talking over economic questions of general interest. Provision has been made in this year's program for the discussion of economic questions. By such discussions a sentiment against lodge practice should be created and maintained, and its evils should be thoroughly drilled into every student in every medical school in the land.

The committee of the British Medical Association, appointed two years ago to study the question, recommended the following:

1. Let there be lodges or fraternal insurance companies, but have the doctor paid a fee, even bulk, more in proportion with the work done.
2. Let the membership in these organizations be limited to those whose wage is incommensurate with the needs of the family.
3. Have the medical management of the lodges in the hands of the local medical society or a committee of the society.
4. Have those physicians who are willing to do this work form a directory from which the individual lodge member may make his selection of his physician.

Two years ago, at Saginaw, we had a discussion of the subject and some good was accomplished. The question ought to be again brought up at Kalamazoo.



**The Treatment of Tetanus.** Within the last few years considerable progress has been made in our knowledge of the treatment of this disease. Following the discovery of antitetanic serum, great hopes were entertained that we had at last found a method of treatment which would greatly reduce the mortality. Unfortunately these expectations have not been realized. Trendelenburg very aptly expressed the situation when he said "Die leichteren Falle heilen auch ohne, die schweren sterben auch mit Serum" (the milder cases get well without serum and the severer cases die with it). We have expected too much from serum treatment. This probably comes from a misunderstanding of what

serum can accomplish. We have seen cases of diphtheria rapidly improve following the injection of antitoxin and have expected antitoxic serum to do the same thing, forgetting that the symptoms of tetanus are in a vast majority of cases not the result of a toxemia, but follow the combination between the nerve cells and the tetanus toxin. Antitoxic serum will neutralize the toxin in the blood, but it will not break up the nerve cell-toxin combination. As a prophylactic, however, it is of the greatest benefit, and should be used in all suspected cases.

The great problem in the treatment of tetanus is to keep the patient alive until the body can overcome the effects of the combined toxin. To do this the muscular contractions must be controlled and the elimination aided, at the same time keeping up the strength of the patient. Of these, the problem of muscular control has been the most difficult to meet. Morphine, chloral and bromide have proven inefficient for this, although recently Cuban writers have claimed good results from the use of enormous doses of chloral. However, Huntington, of San Francisco, at the last meeting of the American Surgical Association, reported a case in which he had pushed chloral to the limit without effect.

Baccelli and the Italian authors in general have secured very good results with the subcutaneous use of carbolic acid. Outside of Italy, however, the results have been far from satisfactory.

Following the discovery of Meltzer of New York, of the sedative action of magnesium sulphate when injected intraspinally, this method was applied to the treatment of tetanus. Some remarkable cures have been thus effected; on the other hand, some cases have been killed—notably Lenormant's. As pointed out by Wallace, the margin between the therapeutic dose and the fatal dose is

very small. Too small a dose will not affect the disease, while one only a little larger will kill the patient.

The attention of our readers is particularly called to the paper by Hutchings, read at the last meeting of the American Surgical Association, an abstract of which appears in the Department of Surgery. He has secured remarkable results in six cases by the administration of chloretone, which drug possesses the advantage of ease of administration and safety. All that is claimed for chloretone is that it controls the muscular spasms. It has no effect on the toxin. If Hutchings' results are confirmed by others, it will be a great advance in tetanus therapy. The application of the method is very easy and the results thus far obtained fully justify its trial in every case.

However, the great problem of finding something which will break up the combination between the toxin and the nerve cells is still before us.



**The Forty-fourth Annual Meeting** of the State Society will convene in Kalamazoo, at the Congregational Church, on Wednesday morning, September 15th. Since the first of the year a committee from the Kalamazoo Academy have been, by day, working on the arrangements and, by night, dreaming of what they can do to make us comfortable and give us a good time. They have worked out all the details in a splendid manner and if they are not rewarded by a large registration they will be greatly disappointed.

The meetings will be held at the Y. M. C. A., where the registration and exhibit will be held, and at the Congregational Church adjoining. The House of Delegates and the Surgical Section will convene in the auditorium of the Y. M. C. A., and all other meetings will be held in the church, including an

address on Wednesday evening, on "Mind Cures in General and the Emmanuel Movement in Particular," by Dr. Archibald Church, Professor of Nervous Diseases in Northwestern University. After this address there will be an entertainment and general good time at the Elks' Temple. The committee are not giving out the details of this event.

We have never had a better program. It will be found almost complete in this issue. There are many papers interesting to everyone. It will be necessary for the chairmen of the sections to enforce the 15 and 5-minute rules in order to complete the program, but every essayist will have had ample notice to cut down his paper so as to get it within the time limit and need not feel hurt if he is interrupted.

Our former president, Dr. Inglis, in speaking of one of the annual meetings, said: "Look at the program and decide if you can afford to miss the papers, decide even more carefully whether you can afford to miss the stimulus of contact with your old-time friends, with keen, enthusiastic men. Bring your wife and daughters; bring your own enthusiasm and carry back a fresh enthusiasm to your work. You may miss two days from the daily grind of practice, but your patients, in the months to come, will feel your enthusiasm and esteem you as a man who keeps up with the profession."



**The Presidents of the State Society** since its foundation in 1866, have numbered forty-three. Among them will be found some of the best known names among the citizens of the state. The list has not been published since the old days of the "Transactions," and it is here brought down to date to refresh the minds of our older members and to instruct those of us who personally knew but a few in the list,

#### **Presidents of the Michigan State Medical Society 1866-1909.**

- 1866. C. B. Stockwell, Port Huron.
- 1867. J. H. Jerome, Saginaw.
- 1868. Wm. H. DeCamp, Grand Rapids..
- 1869. Richard Inglis, Detroit.
- 1870. I. H. Bartholomew, Lansing.
- 1871. H. O. Hitchcock, Kalamazoo.
- 1872. A. B. Palmer, Ann Arbor.
- 1873. E. W. Jenks, Detroit.
- 1874. R. C. Kedzie, Lansing.
- 1875. Wm. Brodie, Detroit.
- 1876. Abram Sager, Ann Arbor.
- 1877. Foster Pratt, Jackson.
- 1878. Edward Cox, Battle Creek.
- 1879. George K. Johnson, Grand Rapids.
- 1880. J. R. Thomas, Bay City.
- 1881. J. H. Jerome, Saginaw.
- 1882. G. W. Topping, De Witt.
- 1883. A. F. Whelan, Hillsdale.
- 1884. Donald MacLean, Detroit.
- 1885. E. P. Christian, Wyandotte.
- 1886. Chas. Shepard, Grand Rapids.
- 1887. T. A. McGraw, Detroit.
- 1888. S. S. French, Battle Creek.
- 1889. G. E. Frothingham, Detroit.
- 1890. L. W. Bliss, Saginaw.
- 1891. Geo. E. Ranney, Lansing.
- 1892. Chas. J. Lundy, Detroit.
- 1893. Eugene Boise, Grand Rapids.
- 1894. H. O. Walker, Detroit.
- 1895. Victor C. Vaughan, Ann Arbor.
- 1896. Hugh McColl, Lapeer.
- 1897. J. B. Griswold, Grand Rapids.
- 1898. E. L. Shurly, Detroit.
- 1899. A. W. Alvord, Battle Creek.
- 1900. P. D. Patterson, Charlotte.
- 1901. Leartus Connor, Detroit.
- 1902. A. E. Bulson, Jackson.
- 1903. W. F. Breakey, Ann Arbor.
- 1904. B. D. Harison, Sault Ste. Marie.
- 1905. C. B. Stockwell, Port Huron.
- 1906. David Inglis, Detroit.
- 1907. Herman Ostrander, Kalamazoo.
- 1908. A. I. Lawbaugh, Calumet.

#### **Secretaries of the Michigan State Medical Society 1866-1909.**

- 1866-1886. George E. Ranney, Lansing.
- 1886-1890. Geo. Duffield, Detroit.
- 1890-1895. C. W. Hitchcock, Detroit.
- 1895-1900. Collins H. Johnston, Grand Rapids.
- 1900-1906. A. P. Biddle, Detroit.
- 1906-1909. B. R. Schenck, Detroit.







A. J. Calubaugh, M. D.

President 1908 - 1909

**A. I. LAWBAUGH, M. D.****President 1908-1909.**

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Dr. A. I. Lawbaugh, the retiring president of the Michigan State Medical Society, was born in Ohio, in the year 1844. After graduating from the Trenton High School, he, like so many of our profession, taught school for five years, when he decided to enter the profession of medicine.

As was customary in those days, and even extending down to the almost immediate past, our President began study for his chosen profession with an old and honored practitioner, one Doctor Brown, of Geneseo, Illinois. After remaining in this office for three years, he entered Rush Medical College and remained one year. Here he met as a fellow student, Dr. E. Fletcher Ingalls, and the friendship thus formed in the plastic years of youth, has ripened into the sweet mellow of beauty, as the years of age are approaching. Leaving Rush, he entered Long Island Medical College, from which he graduated in 1870, receiving the internship by competitive examination. He served in that capacity for one year, when he came to Northern Michigan—to the then new fields of the Copper Country. Dr. Lawbaugh came as the resident physician of the Phoenix Mining Company, which position he held for twelve years. This was in the pioneer days of '71. From the Phoenix he was called to be Chief Surgeon of the Osceola-Tamarack Companies, a position full of responsibility, in consequence of the many accidents which happened because of the changing conditions of mining. This gave him a very large practice in fractures and his great ability as a surgeon was soon recognized throughout the Upper Peninsula.

In 1884, he operated for ovarian tumor for the first time. This was in the early days of asepticism. The operation was performed in the upper room of his

office, which had, during the year, been used for a school room. A few of the seats were removed and a space of not more than thirty feet square was scrubbed and otherwise cleaned. An abdominal operation performed under such conditions can not be appreciated by the younger men of today, yet his patient recovered and left the primitive hospital in the usual time allotted for such patients of today. When we realize the year of his graduation, his almost immediate transfer to the then unknown regions of the Upper Peninsula, he may certainly be classified among the pioneer surgeons of our State.

Feeling that a more thorough equipment was necessary to do the surgical work demanded of him, in 1890 he became a special student under Doctor Gerster, at Mt. Sinai Hospital, New York.

In the earlier years of his surgical work all of the operations were performed in private dwellings and the patients were nursed by friends; yet with these drawbacks and with none of the common advantages attained in our large centers of medical work, his work of that time will compare favorably with the results elsewhere obtained.

Personally Doctor Lawbaugh is, and ever has been, the friend of young men. Many men in the Copper Country today who are doing good, first-class work, have received their first inspiration toward a broader and higher ideal in medicine and surgery from Doctor Lawbaugh—the “Father of Modern Surgery in the Upper Peninsula of Michigan.” And his parting admonition to his assistants, as they have gone out from him into the great world of allurements and detraction, should be written over the parting doorstep of all our universities, viz: “When you cease to be a student you cease to be a scholar.”



## Book Notices

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**Hand Book of Diseases of the Rectum.** By Louis J. Hirschman, M. D., Fellow American Proctologic Society; Lecturer on Rectal Surgery and Clinical Professor of Proctology, Detroit College of Medicine; Attending Proctologist, Harper Hospital; Consulting Gynecologist, Detroit German Polyclinic; Collaborator on Proctology, "Physician and Surgeon"; Editor "Harper Hospital Bulletin"; chairman, Section on Surgery, Michigan State Medical Society; Ex-President Alumni Association, Detroit College of Medicine, etc., etc. Octavo; 374 pages; 147 illustrations, mostly original, including two colored plates. Cloth, \$4.00.

This book, by one of our well-known members, will be read with much interest, for it contains the things which the general practitioner wants to know. It has two strong features, namely, diagnosis set forth in a clear and readily understandable manner and methods of treatment which nearly everyone can easily apply. One lesson which the author tries to inculcate by marked emphasis is the absolute necessity of careful, painstaking and frequent examinations. Methods of examination are given in detail and minutely pictured. Proper stress is laid upon the necessity for early recognition of malignant lesions and the family doctor urged to be on the lookout for cases, as only by the early diagnosis can there be hope of good therapeutic results.

Chapters are devoted to constipation and obstipation, fecal impaction, pruritus ani, anal fissure and ulcer, abscess of the anorectal region, fistula in ano, hemorrhoids, rectal polypi, proctitis and sigmoiditis, dysentery, prolapse of the rectum in children, the feces and their examination.

The illustrations which, for the most part, are original, are unusually good. The paper, binding and letter press are the best which the Mosby Company has yet issued and it is a pleasure to see the quality of the work of this comparatively new firm improving.

We recommend this book for general use and congratulate the author on having done his work so well.

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**Bier's Hyperemic Treatment in Surgery, Medicine and All the Specialties:** A Manual of Its Practical Application. By Willy Meyer, M. D., Professor of Surgery at the New York Post-Graduate Medical School and Hospital; and Professor Dr. Victor Schmieden, Assistant to Professor Bier at Berlin University, Germany. Second Revised Edition. Octavo of 280 pages, illustrated. Philadelphia and London. W. B. Saunders Company, 1909. Cloth, \$3.00 net.

But little over a year ago, we published a re-

view of the first edition of this excellent work. Since its first appearance four large reprints have been exhausted and the authors, than whom no one is more competent to write on the subject, have taken advantage of the opportunity of a second edition to revise the text and incorporate illustrative case histories. An excellent feature which is also new is the list of articles on the subject.

It is an almost indispensable book for one who wishes to keep abreast of the times, for it has been abundantly proven that the Bier method is no fad.

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**Treves' Operative Surgery.** New (3d) Edition. A Manual of Operative Surgery. By Sir Frederick Treves, Bart., F. R. C. S., Serjeant-Surgeon to H. M. the King, Surgeon-in-Ordinary to H. R. H. the Prince of Wales, Consulting Surgeon to the London Hospital; and Jonathan Hutchinson, F. R. C. S., Surgeon to the London Hospital. New (3d) Edition, revised and rewritten. In two octavo volumes. Volume I, 775 pages, with 193 engravings and 17 full-page plates. Half-morocco, \$6.50, net. Lea & Febiger, Publishers, Philadelphia, 1909.

The growing appreciation of the highest class of foreign medical literature is shown in the demand for successive editions of such pre-eminent works as Treves' Operative Surgery. This new edition has been completely rewritten at the request of Sir Frederick Treves by his colleague, Jonathan Hutchinson. The illustrations have been equally brought to date with new figures and a number of original colored plates.

The earlier editions of the work are well known to all readers of surgical literature. In general the arrangement has been preserved in this new edition. The opening chapters deal with general considerations and are followed by 600 pages containing the whole of the great department of Abdominal Surgery, including hernia and gynecological surgery, genito-urinary surgery, and operations on the rectum. In order to accomplish so much in so few pages, the matter is put in an intensely practical manner.

Like most books by the English, the style is excellent. Few medical books are printed and bound as attractively as is this. The edition is small and the price somewhat dear, but one will be well satisfied with the purchase, and will enjoy its possession.

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**The Practical Medicine Series.** Under the general editorial charge of Gustavus P. Head, M. D. Vol. IV., 1909. Gynecology. 225 pages. Cloth, \$1.25. Chicago, The Year Book Publishers, 1909.

In the fourth volume for the year Dudley and Bachellé review recent gynecological literature, dividing the subject into six sections as follows: General Considerations. Infections. Malformations and Tumors. Traumatisms. Displacements. Disorders of Menstruation and Sterility. Particularly interesting is the review on plastic perineal work, which is amply illustrated.

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**The Practical Medicine Series.** Under the general editorial charge of G. P. Head, M. D. Vol. V., 1909. Obstetrics. 236 pages. Cloth, \$1.25. Chicago, The Year Book Publishers, 1909.

De Lee's contribution each year to this series is always excellent and the 1909 effort is no exception to the rule. In the preface, he says that there have been no important discoveries during the past twelve months, and that the operative trend of obstetric practice continues. Extra-peritoneal Cesarean section is taking the place of hebosteotomy. Cesarean section for placenta previa is being taken up in Germany.

Eclampsia is still a mystery, but the newer statistics emphasize again the value of immediate delivery. Much good work is being done on the toxemias of pregnancy.

All of these points and many others of an everyday nature are discussed.

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## County Society News

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### Houghton.

At a recent meeting of the Houghton County Society the subject of medical defense was discussed and the society's delegate unanimously instructed to vote in favor of the plan.

JOHN MCRAE, *Sec'y.*

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### Ottawa.

The regular August meeting of the society was replaced by a most enjoyable picnic.

The program for the meeting on September 14th comprises papers on the eye, ear, nose and throat, as follows:

1. Diseases of the Eye in General Practice, A. Leenhouts, Holland.
2. Diseases of the Ear in General Practice, J. H. Mowers, Fennville.
3. Diseases of the Nose and Throat in General

Practice, H. J. Cherry, Spring Lake.

The annual meeting, for reports and election of officers, will occur on October 12th, when the following scientific program will be carried out:

1. The Effect of Kidney Lesions on the Heart and Bloodvessels, J. B. Whinery, Grand Rapids.
2. Post-mortem Appearances of the Different Forms of Nephritis, J. H. R. Gervers, Jenison.
3. The Treatment of Bright's Disease, H. A. Stroud, Douglas.

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### St. Joseph.

The St. Joseph County Society held a splendid meeting at Constantine on July 21st, when the following program was carried out:

The Diagnosis and Treatment (Medical and Surgical) of Gallstones, Dr. L. K. Slote, of Constantine.

Discussion—Dr. J. R. Williams, White Pigeon; Dr. F. C. Kinsey, Three Rivers.

The Diagnosis and Treatment of Typhoid Fever, Dr. W. C. Cameron, White Pigeon.

Discussion—Dr. J. H. O'Dell, Three Rivers, and Dr. S. R. Robinson, Sturgis.

The Diagnoses and Treatment of Summer Diarrhoeas of Infancy, Dr. A. J. East, Constantine.

Discussion—Dr. Mardin Sabin, Centreville, and Dr. W. A. Royrer, Mendon.

The Diagnosis and Treatment of Appendicitis, Dr. R. E. Dean, Three Rivers.

Discussion—Dr. F. W. Clements, Burr Oak,, and Dr. A. W. Scidmore, Three Rivers.

The Treatment of Inevitable Abortion, Dr. D. M. Kane, Sturgis.

Discussion—Dr. F. A. Pratt, Centreville, and Dr. J. J. Kelly, Burr Oak.

F. C. KINSEY, *Sec'y.*

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## News

Dr. J. H. Warner, formerly of 698 Woodward Ave., has returned from Europe and has opened offices in the Bowles Building, corner of Grand River Avenue and Griswold Street. Dr. Warner will devote his time to diseases of the nose and throat.

Dr. H. S. Smith, formerly of Negaunee, has entered practice at Ishpeming and is on the staff of the Ishpeming Hospital.

The date for the next meeting of the American Medical Association has been fixed for June 7th to 10th. St. Louis is the place.

Dr. Hugo Freund has been appointed chairman of the Program Committee of the Wayne County Society for the coming year.

Dr. A. W. Imrie, of Detroit, who has been traveling in Europe, attended the International Congress.

Dr. Eugene B. Pierce, a graduate of Williams College and the University of Michigan, has been appointed Superintendent of the State Tuberculosis Hospital at Howell.

Dr. A. S. Kimball, of Battle Creek, who has been working in pediatrics in England, attended the recent meeting of the British Medical Association.

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## Deaths

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Alfred B. House, formerly of Memphis, died at his home July 9th. Dr. House was 74 years of age and graduated from the University of Michigan in 1866.

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## Obituary

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### Edwin H. Van Deusen, A.M., M.D.

In the death of Dr. E. H. Van Deusen, on July 6, 1909, the profession of Michigan loses from its active membership one who faithfully served the State and who has left his imprint upon the special work to which he was devoted and in which he did pioneer service.

Born at Livingston, New York, August 29th, 1828, of Knickerbocker parentage, that substantial Dutch stock from which so many fine and staunch characters have sprung, he graduated from Williams College at twenty, and three years later received from his alma mater the degree of Master of Arts, graduating at this time from the

College of Physicians and Surgeons, New York City. He then served for a time on the staff of the New York Hospital and was one of the few who, stricken while on service during a very fatal epidemic of typhus fever, yet recovered. A little later he was appointed an Assistant Physician to the Utica Asylum for the Insane, becoming eventually its First Assistant Physician. While in Utica, he was for a time editor of the *American Journal of Insanity*. In 1848, the Michigan Legislature made preliminary provision for the Michigan Asylum for the Insane, and in 1855 Dr. Van Deusen was appointed to be Medical Superintendent. He continued for a time in his position at the Utica Asylum, but acted in an advisory or supervisory capacity to the Michigan authorities. He was thus able to correct some very inadequate conceptions as to what should be the size and suitable location for such an institution. He visited Kalamazoo frequently during 1855, '56 and '57, taking up his residence there in 1858, shortly after his marriage to Miss Cynthia Wendover, of Stuyvesant, N. Y. He seems to have been of active assistance in securing the first large appropriation of \$100,000 from the legislature for asylum purposes, and himself superintended the erection of the buildings.

Michigan's first asylum was formally opened August 29th, 1859, and Dr. Van Deusen's administration of its affairs proved capable and forceful and continued until his resignation in February, 1878, because of ill-health. This period of his active service was one of pioneer work in the treatment of the insane, and Dr. Van Deusen was a thoughtful student, a clear thinker, a fine executive. He was one of the earliest to differentiate neurasthenic cases, and to this neurosis he gave the name, "neurasthenia," although this service has been commonly but erroneously attributed to another.

Though naturally a man of great modesty and reserve, his obvious interest in his patients' welfare, his gentle tact and courteous treatment won for him the love of a host who had been his patients. One who was long one of his assistants says that he earnestly impressed upon his assistant physicians the importance of the personal influence of the attending physician and expressed the belief that this often had more, even than medicine, to do with the restoration of the patient to mental health.

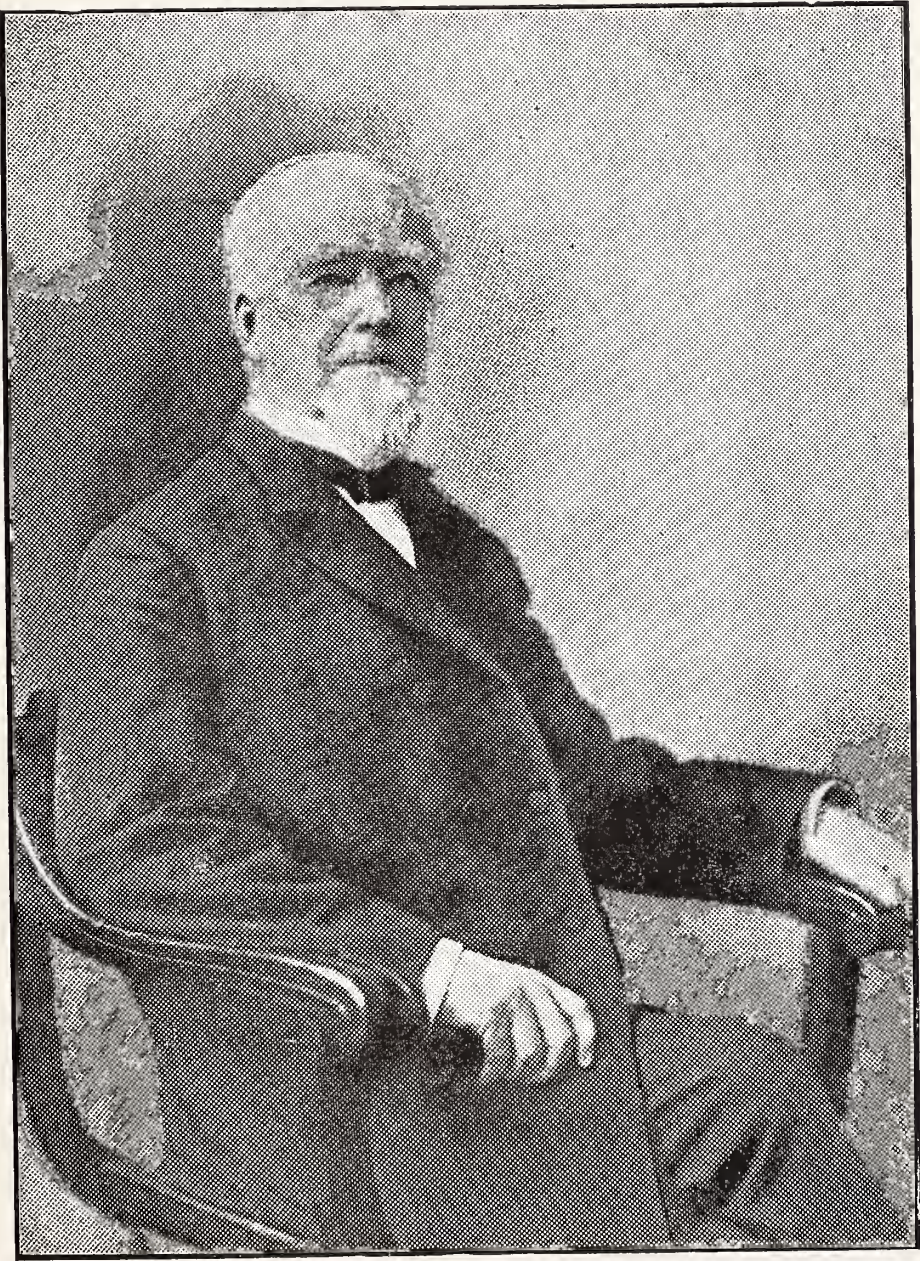
The State was not indifferent to the high class of ability displayed by Dr. Van Deusen and called upon him several times for active service apart



from his regular duties. He served as a member of the commission appointed to select the site and superintend the construction of the Eastern

member of the State Board of Corrections and Charities.

Aside from these semi-public duties, he lived



DR. E. H. VAN DEUSEN

Michigan Asylum (which was opened August 6th, 1878), and he also served in a like capacity to the Northern Michigan Asylum (opened in 1885), and from 1881 to 1885 he served as a

a life of quiet retirement in Kalamazoo, wisely enjoying such means as had come to him and Mrs. Van Deusen. So unostentatious have been their deeds of kindness that none can ever know



their number or extent, but there is ample testimony that in quiet ways they have let sunshine into many darkened lives. Their larger gifts are only known because they were given to and are enjoyed by an appreciative local public. They are the Public Library building, one of Kalamazoo's most appropriate and useful buildings, the St. Luke's Parish House, and a substantial gift to Bronson Hospital. In the Public Library building, Dr. Van Deusen provided, with characteristic forethought, that apartments should be reserved for the uses of the Kalamazoo Academy of Medicine. It was the wish of Dr. and Mrs. Van Deusen that the least possible publicity should attach to their connection with these gifts, and by their request formal openings, likely to give occasion for lauding the donors, were carefully avoided.

Dr. Van Deusen was a man naturally reserved, of quiet dignity, but yet kindly and genial. It has been the writer's privilege for many years to catch occasional glimpses of the beautiful home life of the doctor and his cordial wife and the hospitality here extended to the friends welcomed into that home was ever of a kind to make welcome its repetition. His wife has always been equally interested in all that claimed the doctor's life and attention, and they have been joint givers in all their philanthropies. She, with a son, Robert T. Van Deusen, of Newburgh, New York, survives him.

Dr. and Mrs. Van Deusen planned wisely their memorials and lived to enjoy their increasing usefulness. In all the interests of the Public Library Dr. Van Deusen was especially concerned, and since its dedication his face had been a familiar one in the building which they had given.

A beautiful Christian life, in all that this implies, has been that of Dr. and Mrs. Van Deusen in Kalamazoo. He had ever been a high-minded Christian gentleman of the finest type, absolutely "integer vitæ scelerisque purus." A fine citizen, a philanthropist, a physician known for notable service, his name will ever be a credit to Michigan, and his work has had not a little to do with setting that high standard among institutions for the care of the insane for which Michigan has been well known. Probably no single influence more than his has served to zealously keep Michigan's asylums apart from politics, and this has done much to maintain their efficiency.

C. W. HITCHCOCK.

## Correspondence.

Detroit, August 10, 1909.

To the Editor:

When is a member of the State Society a member, and when not? May I discuss this question in your department of correspondence in the September issue?

Medical defense is becoming an integral part of the work of so many state societies that Michigan will adopt no untried experiment should the House of Delegates decide to put an efficient plan into effect. All of the existing plans provide defense for every member not in arrears, except that Maryland and Pennsylvania have old and but partially effective plans in force, while Kentucky is experimenting with an untried plan of voluntary membership which does not offer the *assurance* of defense to even its *voluntary* members. Inasmuch as some objections have been raised to the proposed Michigan plan and hence to the almost fundamental principle of defense as offered in nearly all the states, it seems pertinent to discuss broadly what medical defense is really for, and *who* should have it. Hence I again crave space in your valuable columns.

Medical defense really means the machinery for defense. In placing it at the disposal of any and every member, a state society in no way justifies or indorses the alleged civil offense of the defendant member, and no affiliated member incurs the slightest actual or moral responsibility to aid in the defense of any accused member, whether he believes him guilty or innocent of the civil charge.

The principal reason why this co-operative defense is advisable is so tersely put by the Medico-Legal Committee of the Illinois Medical Society that I cannot refrain from quoting it: "The law relating to physician's liability (in civil malpractice) is the law of decisions rather than of statutes. It is known to but few lawyers and to fewer physicians. We are sure that most of the physicians' damage suits arise from an ignorance of law on the part of lawyers. The attending physician is required to administer to his patient with due diligence, exercising only such skill as is customary in his neighborhood. There is no guarantee of results. The doctor can make mistakes and those mistakes can result in harm to the patient. Those mistakes may be due to commission or omission. The doctor cannot be held

liable unless he was not reasonably skillful and diligent. It is not required that he give his patient advantage of the latest medical discoveries or be entirely up to date. In fact the law and procedure rather favor over-confidence."

This being the law, we unite for protection against its maladministration by ignorant or unprincipled lawyers.

A malpractice suit usually costs the doctor hundreds of dollars in money, much time and worry, and often much loss of prestige. Since it is true that but rarely is a doctor guilty of actual malpractice in a legal sense, any pooling of interests which will give every member of the State Society access to the many legal decisions directly and indirectly germane to his case cannot but be of great assistance to him in case of need.

If it be proven that this pooling of interests is prophylactic in deterring lawyers from seeking every possible or plausible pretext to find fault with the end results of medical practice, who loses thereby but the lawyer and who gains thereby but the doctor?

The matter does not involve the general public at all. The physician's liability is unchanged. He always has been, is now, and always will be held responsible for the results of ignorance, incompetence or negligence, and the court and jury, whose province it is, should determine his guilt or innocence. The ultra critical medical man has been and even yet is too prone to think, or even say, that a given case treated by him would have yielded different and better results. This is merely a matter of opinion, not of proven fact. He does not know the law or the facts in this specific case, and yet would constitute himself judge and jury in a manifestly unethical, unprofessional and unfair way.

Probably cases of actual malpractice, in a legal sense, do occur occasionally, but since the final determination of what constitutes malpractice rests always with the courts, what legal or moral right has a physician to adjudge a professional brother guilty, *a priori*, when the courts may subsequently find him innocent?

Under the reorganization plan of the A. M. A., every legally qualified, reputable practitioner is supposedly eligible to membership in his County Society, and hence the State Society. We welcome many men who would themselves admit that they are not as well educated, as experienced or even as generally competent as some of the leaders of the profession. We take their money in support of our Society expenses and our State

Journal. We inflict upon them our scientific papers and the reports of our wonderful cases. We eat and drink with them and find them good fellows, conscious of their own limitations but eager for broader knowledge, upholding as well as the leaders, and sometimes better, the honor and dignity of the profession. Has then our professional recognition, supposedly so freely extended, a string to it? Can we admit men to full professional affiliation in all other respects, but deny them the privilege of participating in the advantages of co-operative medical defense?

However untenable this view may appear, it has been advanced seriously and in good faith by men otherwise broad-minded, who urge no substitute plan, but announce continued opposition to "any plan that proposes to lend the moral and financial support of the State Society to the defense of *every* suit for civil malpractice that may be brought against *any* member."

It would seem that *any* member of the State Society ought to be entitled to all the privileges of any other member, and I believe it to be absolutely true that the plan of medical defense must be broad enough to cover *every* suit against any member to be of any practical value.

Even a voluntary organization in no way escapes this objection, unless membership be restricted to a select few.

To my mind an objection of this kind arises from an imperfect and faulty conception of so-called medical defense. The State Society maintains a journal which is not read, except occasionally, by all members. It and its component county societies conduct regular meetings which are not participated in, attended by or even appreciated by all members, yet both these advantages are desired by and authorized by a large majority of members. Suppose now that a large majority of the membership of our State Society desire to install a "Legal Information Bureau of Self Help." This bureau would assist any member who desired to use it in determining *the law* regarding his particular case and in presenting the law to the only tribunal whose function it is to pass upon its specific application—namely, the judge and jury.

If the law offers no justification for the alleged civil malpractice of the member, then he has no defense, and must either compromise his case before trial or expect a verdict against him. Except for his small contribution toward the support of this bureau, no member has the slightest ethical or moral obligation to aid its



work other than to continue to indorse the existant rule of equity in all civic life whereby *a man is adjudged innocent until the courts find him guilty*.

If this Bureau of Self Help is organized, the State Society will not aid any member to evade or shirk responsibility, but will aid him in presenting the *law* forcibly and plainly so that his innocence may be proven, if innocent. If legally guilty of malpractice, no defense will save him. Each man will make his own defense based on the law and the facts.

The rights of the general public remain as now, for the law fixing the responsibility of physicians gives ample protection to the public against ignorant, incompetent or negligent doctors.

We need protection from the public in this matter, rather than they from us. This is an era of litigation. Court dockets everywhere are crowded with countless damage suits, not twenty-five per cent of which have any legal standing. It costs next to nothing to start these suits, and attorneys find enough people willing to settle for small sums, rather than fight, that the business pays. A legislative act requiring plaintiffs in damage cases to deposit security for costs would clear the dockets like magic. But prominent jurists hold that litigation, like salvation, should be free, lest occasionally a poor man be deprived of justice. Hence we need some strong anti-phlogistic method of deterring lawyers, ignorant of the law concerning civic malpractice, from harassing the medical profession, and our own proposed Bureau of Self Help offers the best solution of the problem.

We have little to fear from the less competent men in our profession, for they are seldom sued for malpractice. Conscious of their own limitations, they are more cautious and share responsibility with consultants more frequently than stronger practitioners do. With little professional or social standing and little property, they offer little prospect to the shyster lawyer of a cash settlement or a paid judgment.

The man of standing in his community, having or believed to have some financial assets, offers the best bait.

Moreover, careful observation, I think, justifies the conclusion that good practitioners are no more successful than poor ones in avoiding the appearance of evil. We all make mistakes both of omission and commission. We all have expected, and unexpected, bad results. If under the law, rightly understood and adequately pre-

sented, we are blameworthy for untoward end results, then let us individually take the consequences. But let the courts decide rather than carping co-workers.

In January, 1908, at the request of the Council, I discussed before them the general subject of medical defense. In June, 1908, the House of Delegates provided for a Committee on Medical Defense, who have endeavored to formulate a feasible plan and to ascertain the sentiment of all members regarding it. In November, 1908, the committee sent a letter to each County Society, and since the same date the *Journal* has devoted much space to a consideration of the question, in a broad, educational way, and in August, 1909, a postal card vote of all members was taken.

The endeavor from the start has been to inform the profession upon the subject and to ascertain their wishes.

It seems to me that nothing can be gained by further postponing the final decision which will be made by the action of the House of Delegates. The profession either want the work established or they do not. It is futile to hope for absolute unanimity, for a large number of men never yet have been and never will be absolutely a unit regarding a question of public policy.

Some minor details of the submitted plan can readily be modified, if desired.

But the fundamental principle of equal justice to all is, I believe, essential to complete success in this work.

Other State Societies have had sufficient experience with the essentials of our proposed plan to demonstrate its complete working success. Our plan is the broadest of them all and will, we feel sure, provide every member safe protection against the maladministration of justice from which many men have suffered.

No voluntary organization escapes the fancied objection raised against this plan, while a voluntary organization will be too deficient in money and in adherents to accomplish the most good at the lowest cost.

If after this long and extensive campaign of education we are not yet ready to take up medical defense as one of the advantageous features of membership in the State Society, let us drop the matter entirely, rather than openly admit a double standard of qualification for membership. It may be true that we have both sheep and goats. But no normal eye is perfect enough to be certain of always telling them apart.

And so I say let them run together. The environment cannot harm the goat, and if he occasionally butts a little life into the placid sheep—they need it!

FRANK BURR TIBBALS,  
*Chairman, Committee on Medical Defense.*

## PROGRAM OF THE FORTY-FOURTH ANNUAL MEETING OF THE MICHIGAN STATE MEDICAL SOCIETY.

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Y. M. C. A. Building and Congregational Church,  
Kalamazoo, September 15 and 16, 1909.

### THE COUNCIL.

Chairman—C. B. Burr, Flint.

Secretary—W. H. Haughey, Battle Creek.

*Tuesday, September 14th, 3:30 P. M.*

*Wednesday, September 15th, 2 P. M.*

*Thursday, September 16th, 2 P. M.*

### HOUSE OF DELEGATES.

Y. M. C. A. AUDITORIUM.

President—A. I. LAWBAUGH, Calumet.

Secretary—B. R. SCHENCK, Detroit.

BY-LAWS—CHAPTER IV., Section 1. Each Component County Society shall be entitled to send to the House of Delegates each year one delegate and one alternate for every 50 members, and one for each major fraction thereof; but each County Society holding a charter from this Society, which has made its annual report as provided in this Constitution and By-Laws, shall be entitled to one delegate and one alternate.

#### First Session, Tuesday, September 14th.

8:15 P. M.

1. Call to order by the President.
2. Roll Call.
3. Reading of Minutes of the last Annual Meeting.
4. Report of the Council.  
C. B. BURR, Flint, Chairman.
5. Report of Committee on Legislation and Public Policy and on the work of the National Legislative Council.  
W. H. SAWYER, Hillsdale, Chairman.
6. Report of the Committee on Medical Defense.  
FRANK B. TIBBALS, Chairman.
7. Miscellaneous Business.

- (a) Election of Committee on Nominations to nominate;

1st, 2nd, 3d and 4th Vice-Pres.

Councilors for the 1st, 3rd, 6th, and 11th Districts.

Representative in House of Delegates,  
A. M. A., for 2 years.

To fix place of meeting for 1908.

(By-laws, Chapt. VI., Sec. 2 as amended June 12, 1903).

The House of Delegates shall elect annually, at its first meeting, a Nominating Committee of Five from the House of Delegates, no two of whom shall be from the same Councilor District.

- (b) Action on amendment to Section 3 of Chapter III. of the By-Laws, proposed by W. J. Dubois, delegate from Kent County, at the last session of the House of Delegates at the Manistee meeting, and laid over under the rules. Such amendment adds to Section 3 the following: "No paper shall be read by title nor read by any other person than its author, except as a result of sickness of author or by unanimous vote of the section to which it belongs."

Section 3 of Chapter III. now reads:

"Except by special vote the order of exercises, papers and discussions as set forth in the official program shall be followed from day to day until it has been completed"

- (c) Appointment of other Working Committees.

- (d) Proposal of Amendments to the Constitution.

- (e) Proposal of Amendments to the By-Laws.

Other Miscellaneous Business;

*Adjournment.*

#### Second Session, Wednesday, September 15th.

8:30 A. M.

1. Reading of the Minutes of the Previous Session,

2. Unfinished Business.
  - (a) Amendments to Constitution and By-Laws.
3. Report of the Committee on the Study and Prevention of Tuberculosis.
 

H. J. HARTZ, Detroit, Chairman.
4. Report of Committee to Encourage the Systematic Examination of the Eyes and Ears of School Children Throughout the State.
 

WALTER R. PARKER, Detroit, Chairman.
5. Miscellaneous Business.

*Adjournment to General Meeting.*

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**Third Session, Thursday, September 16th.**

8 A. M.

1. Reading of the Minutes of the Previous Session.
2. Report of Committee on Nominations.
3. Unfinished Business.
4. Report of Committee on Venereal Prophylaxis.
 

A. P. BIDDLE, Detroit, Chairman.
5. Miscellaneous Business.

*Adjournment to Section Meetings.*

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**GENERAL MEETING.**

CONGREGATIONAL CHURCH.

President—A. I. LAWBAUGH, Calumet.  
 State Secretary—B. R. SCHENCK, Detroit.

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**First Day, Wednesday, September 15th.**

10 A. M.

1. Call to Order.
2. Prayer.
 

REV. DR. GELSTON.
3. Address of Welcome.
 

HON. FRANK H. MILHAM,  
 Mayor of Kalamazoo.
4. Address of Welcome on Behalf of the Medical Profession.
 

DR. A. I. NOBLE, Superintendent of the  
 Michigan Asylum.
5. Report from the House of Delegates.
 

B. R. SCHENCK, Detroit, State Secretary.

6. Address of the President.

A. I. LAWBAUGH, Calumet.

Subject—"The Physician, His Duties and Relations to the Profession and the Public."

7. Miscellaneous Business. Under this head there will be a general discussion of questions on medical economics. This opportunity is given to any member who wishes to bring before the entire society, any subject of general interest, either by informal discussion, or by formal resolutions.
8. Nominations for President, 1909-1910.
9. Adjournment.

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**Wednesday Evening, September 15th.**

8:15 P. M.

CONGREGATIONAL CHURCH.

Address by the Guest of Honor,

DR. ARCHIBALD CHURCH, Professor of Nervous and Mental Diseases, Northwestern University, Chicago.

Subject, "Mind Cures in General and the Emmanuel Movement in Particular."

After the address the visiting members will be entertained by the Kalamazoo Academy at the Elks' Temple.

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**Second Day, Thursday, September 16th.**

11:30 A. M.

1. Unfinished Business.
2. Report from the House of Delegates.
 

B. R. SCHENCK, Detroit, Secretary.
3. Miscellaneous Business. Another opportunity to bring to the attention of the general body any questions of general interest.
4. Announcement by the Committee on Nominations on the Result of the Ballot for President.
5. Introduction of President-elect.
 

*Adjournment sine die.*

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**PROGRAM OF THE SECTIONS.**

The following rules from Chapter III. of the



By-laws govern all papers, but may be modified in case of necessity by vote of the section in which the necessity arises.

SEC. 3. Except by special vote the order of exercises, papers and discussions as set forth in the official program shall be followed from day to day until it has been completed.

SEC. 4. No address or paper before the Society, except that of the President, shall occupy more than fifteen minutes in its delivery; and no member shall speak longer than five minutes, or more than once on any subject.—(*As amended May 25, 1906.*)

SEC. 5. All papers read before the Society shall be its property. Each paper read shall be deposited immediately with the Secretary, but the author may also publish the same in any reputable journal not published in this State, provided the printed article bears the statement that it was "read before the Michigan State Medical Society."

## SECTION OF GENERAL MEDICINE.

CHAPEL, CONGREGATIONAL CHURCH.

Chairman—WILLIAM M. DONALD, Detroit.  
Secretary—G. F. INCH, Kalamazoo.

On account of the length of the program, and in order to give every one an opportunity, the fifteen minute rule will be enforced.

The Secretary of the Section will collect all papers as soon as read.

Discussions are limited to five minutes.

### First Session, Wednesday, September 15th.

1:45 P. M.

#### 1. Sero-diagnosis of Syphilis and its Clinical Value.

HENRY ROCKWELL VARNEY, Detroit.

Theory, and technic of the Wasserman Reaction. Difficulties arising with the materials and the technic. Modifications of the original reaction and precipitation reactions. The great importance of this test in the diagnosis and treatment of syphilis.

Discussion opened by James F. Breakey, Ann Arbor, and Dean Lorce, Ann Arbor.

#### 2. Syphilis of the Liver;

ARTHUR R. EDWARDS, Chicago.

Consideration of the two usual types, gummatous and indurative, cirrhosis-like forms. Consideration of cases causing stomach symptoms, simulating liver abscess, gall stones, peritonitis and pylephlebitis.

Discussion opened by William F. Breakey, Ann Arbor, and Andrew P. Biddle, Detroit.

#### 3. Aneurysm of the Descending Thoracic Aorta; JOHANN FLINTERMAN, Detroit.

Difficulty of diagnosis of such cases. The frequency of occurrence. The differential diagnosis between pulmonary neoplasm and aneurysm of the descending thoracic aorta. Relation between syphilis and aneurysm. A few remarks on pulmonary syphilis. Demonstration of the specimen of the aneurysm and the Roentgen picture of this case.

Discussion opened by W. J. DuBois, Grand Rapids, and John H. Kellogg, Battle Creek.

#### 4. The Physician and the Anti-Tuberculosis Campaign;

A. S. WARTHIN, Ann Arbor.

This paper will treat of the changing attitude of laymen toward medicine, of the popular demand for preventive medicine, and of the increased knowledge of the laymen concerning matters once supposed to be the property of the physician. As a result of this change, the profession of medicine is also undergoing an evolution from a science and an art professing to cure, to a science of prevention of disease. The physician of the present day, must meet this changed attitude. His duties become no longer those relating to his immediate patients, but he must concern himself with the broader questions of public health and the fight against preventable diseases. In modern Health Board work, in school inspection, in anti-tuberculosis work, in the fight against venereal diseases, he finds a legitimate field for activity. The increasing medical knowledge among the people at large demands that the physician lead these movements in the prevention and extermination of diseases. There is a growing tendency for the people to consult physicians as to the state of their health and what things should be avoided or prevented. The physician must meet this new conception of medical practice or fall behind. In the fight again tuberculosis he must especially take a leading and important part. The paper gives further a detailed description of the relations of the physician to the Local and State tuberculosis associations.

Discussion opened by J. B. Jackson, M. D., Kalamazoo, and Fred R. Belknap, Benton Harbor.

#### 5. Further Studies on the Diagnostic Value of the Hemolytic Tests in Cancer and Tuberculosis;

FRANK SMITHIES, Ann Arbor.

It has been shown that in blood serum of patients affected with cancer there exists a property causing destruction of red cells of humans—especially healthy humans. It has been suggested that this reaction be used for clinical diagnosis of new growths.

In tuberculous patients' blood serum, some observers have noted that the hemolytic property with respect to healthy individuals will cause destruction of red blood cells from tuberculous patients.

The paper considers the development of the hemolytic reactions in detail, and reports the author's results in more than one hundred and fifty cases of cancer, tuberculosis and other disease conditions.

Discussion opened by Victor C. Vaughan, Ann Arbor, and Alden Williams, Grand Rapids.

#### 6. Landmarks in the Diagnosis of Incipient Consumption;

ELMER F. OTIS, Battle Creek.

1. Signs and Symptoms that are not positively diagnostic. 2. The Uncertain and Unreliable factors that are

often given undue prominence. 3. The few (and positive) findings that must decide the real diagnosis. Conclusions.

Discussion opened by T. M. Koon, M. D., Grand Rapids, and Victor C. Vaughan, Jr., Detroit.

## Second Session, Thursday, September 16th.

9 TO 11:30 A. M.

### 1. Vincent's Angina;

M. L. HOLM, Lansing.

After a brief general historical consideration, the prevalence, etiology, bacteriology, pathology, symptomatology, diagnosis, contagion, prognosis and treatment are separately considered. The information is largely collected from about two hundred and fifty cases of suspected diphtheria examined during the past year, in which the fusiform bacilli occurred about sixty times. These sixty cases are tabulated and condensed, briefly giving age, sex, day of disease, location and color of membrane, temperature, clinical diagnosis and cultural results for publication, will be only generally considered in the paper as read.

Another series of about thirty cases, which had been clinically diagnosed as diphtheria and found by bacteriological examination not to be diphtheria, has been similarly tabulated, showing both swab and cultural findings which indicate that "bacillus fusiformis" is the most frequent cause of pseudo-diphtheria. Drawings showing the organism from cases of "Vincent's Angina" have been prepared and will be presented.

Discussion opened by T. B. Cooley, Detroit, and Blanch Epler, Kalamazoo.

### 2. The Clinical Importance of Blood Pressure Observations;

B. A. SHEPARD, Plainwell.

Physiology of blood pressure; conversion of intermittent stream into steady stream; elements producing pressure, heart, arteries, peripheral resistance or friction.

Elements regulating normal pressure; tissue supply, secretions and excretions, rest, psychic phenomena, exercise, age, menstruation, pregnancy, labor, viscosity of blood. Reports of experiments. Normal limits and variations.

Pathological processes affecting tension, arterial disease (a) local, (b) general, kidney alterations (a) acute, (b) chronic, nervous and mental diseases, narcotics; surgical conditions: anaesthesias, operative procedures in abdomen, pelvis, thorax and head; hemorrhage collapse, shock obstetrical complications.

Principle of measurement of pressure; comparison of methods and apparatus.

Therapeutics, medicinal and hygienic.

Discussion opened by Richard E. Mercer, Detroit, and C. B. Fulkerson, Kalamazoo.

### 3. Paroxysmal Tachycardia;

HERBERT M. RICH, Detroit.

1. Importance of the Recognition of these cases. Definition. 2. Classification of Cardiac Irregularities. 3. The Nodal Rhythm. 4. Cardiac Sclerosis. 5. Case Reports. 6. Diagnosis. 7. Prognosis. 8. Treatment.

Discussion opened by Charles W. Hitchcock, Detroit, and Walter D. Ford, Detroit.

### 4. Prognosis in Cardiac Insufficiencies;

HUGO A. FREUND, Detroit.

Profession should recognize that great responsibility rests in giving an accurate prognosis in any cardiac affection. Imperfect knowledge of the physiology of the heart, of its power of recuperation, and of its pathology often lead to grave errors in prognosis and unjustly influence the lives of many individuals.

Different forms of cardiac incompetency will be discussed (1) in relation to the conditions in the heart itself; (2) in relation to other organs of the body; (3) in relation to the habits and previous history of the individual.

Certain definite principles for basing a prognosis in all heart affections will be considered, founded mainly upon the limits and power of cardiac response.

Discussion opened by George McKean, Detroit, and A. W. Ives, Detroit.

### 5. Value of the Orthodiagraph;

JAMES VAN ZWALUWENBURG, Ann Arbor.

Uncertainty of the results of Percussion. Distortion of the Roentgenogram. Principle of the Orthodiagraph. Technique. Forms of heart shadow. Analysis of the left border. Mensuration. Influence of stature, weight, etc. Effect of moderate and strenuous exercise. The heart in paroxysmal tachycardia. The heart in valvular disease. Its value in teaching.

Discussion opened by D. M. Cowie, Ann Arbor, and H. H. Cook, Detroit.

## Third Session, Thursday, September 16th.

1:45 P. M.

Election of Chairman for one year and Secretary for two years.

### 1. Present Status of Stomach Lavage;

CHARLES D. AARON, Detroit.

Indiscriminate Use. Limitations. Value in Intoxications. Contraindications. Safe method. Autolavage.

Discussion opened by David Levy, Kalamazoo, and E. L. Eggleston, Battle Creek.

### 2.—The Value of Pathological Examinations in the Diagnosis of Malignancy and Analysis of Reports;

CARL S. OAKMAN, Detroit, and

THADDEUS WALKER, Detroit.

Characteristics of malignant growths. Classification. Probability of confusing malignant with benign growths, inflammatory conditions, granulomata, tuberculosis. Significance of differentiating the varieties of carcinoma, sarcoma and endothelioma. Effect of accurate diagnosis on prognosis and treatment. Result of systematic pathologic examination in improving medical diagnosis. Tabulation of diagnoses of malignancy in over 2400 pathologic sections.

### 3. Transitory Insanity;

CHARLES W. HITCHCOCK, Detroit.

Consideration of its essence, its possible medico-legal relations, the principles which are often sought to be applied and of those which should obtain. Illustration.

Discussion opened by E. A. Christian, Pontiac, and David Inglis, Detroit.

4. Why Should Enlarged Tonsils and Adenoids be Removed, When and How;

COLLINS H. JOHNSON, Grand Rapids.

Discussion opened by R. Bishop Canfield, Ann Arbor, and E. J. Bernstein, Kalamazoo.

5. Treatment of Gastric Ulcer;

JOHN T. WATKINS, Detroit.

The non-operative treatment of gastric ulcer depends, for the greater part, upon the dietetic management of the case in question. The ideas set forth by Lenhart have proven very useful in the hands of the author. Enforced rest also plays a very prominent part. Environment must be considered. Medicinally, little is required except for special symptoms and occasionally, for the regulation of the bowels.

Discussion opened by A. W. Crane, Kalamazoo, and James E. Davis, Detroit.

6. Education in the Prevention of Venereal Diseases;

R.MCD HARKIN, Marquette.

## SECTION ON SURGERY, OPHTHALMOLOGY AND OTOTOLOGY.

AUDITORIUM, Y. M. C. A.

Chairman—L. J. HIRSCHMAN, Detroit.

Secretary—R. E. BALCH, Kalamazoo.

On account of the length of the program, and in order to give every one an opportunity, the fifteen-minute rule will be enforced. Discussions are limited to five minutes.

The Secretary of the Section will collect all papers as soon as read.

### First Session, Wednesday September 15th.

1:45 P. M.

Chairman's Address; L. J. Hirschman, Detroit.

1. Suprapubic Prostatectomy;

ANGUS McLEAN, Detroit.

In suitable cases the shock is less than in the perineal operation. It allows the operator to make a thorough inspection of the bladder. There is also better urinary control following this method.

2. Senile Hypertrophy of the Prostate;

DEAN LOREE, Ann Arbor.

Report of a year's work at the University Hospital. A short history of the operation. Pathology, especially of those glands showing carcinomatous change. Advisability of early operation. Post-operative complications.

3. Diagnosis and Treatment of Prostatitis and Seminal Vesiculitis;

M. A. FECHHEIMER, Detroit.

Diagnosis and symptomatology. Method of rectal examination. Examination of the secretions of the prostate and seminal vesicles, stained and unstained. Distinction between an aseptic prostatitis and a mixed infection. Bacteria found. Prognosis. Treatment. When may a patient be allowed to marry.

Discussion of the preceding papers opened by F. W. Robbins, Detroit.

4. Danger in "Interval" Appendectomies;

W. H. HAUGHEY, Battle Creek.

Two beautiful young ladies, less than twenty years of age, had appendicitis; both made good recoveries; both had interval operations; both died. Why?

Discussion opened by James E. Davis, Detroit.

5. Surgery of the Pylorus;

J. A. MACMILLAN, Detroit.

6. Foreign Bodies in the Air Passages and Esophagus;

PRESTON M. HICKEY, Detroit.

Introduction. The use of the Jackson Tube. The aid of the Roentgen ray in diagnosis. The superiority of the Jackson tube over other means of examination. Summary of the technique employed. Report of cases, including safety-pin in bronchus, tooth in bronchus, coins in esophagus, etc.

### Second Session, Thursday, September 16th.

9 TO 11:30 A. M.

1. Some Experiments in Intestinal Anastomosis;

CONRAD GEORG, Ann Arbor.

Brief historical review of the older methods. The original Lambert suture not primarily a sero-muscular stitch as described in all modern text books. Quotation from one of Lambert's original papers in proof of this. The difficulty of performing an aseptic operation on the intestine is described. Experiments carried out upon dogs to demonstrate the methods of F. B. Walker, Parker and Kerr, and Moszkowicz. Conclusions.

2. Sub-phrenic Abscess;

F. B. WALKER, Detroit.

Location; source; symptoms; course and treatment. History of a case discharging spontaneously and termination in recovery.

3. The Urgent Need of Operation in All Cases of Hernia;

E. B. SMITH, Detroit.

I. Local pathological manifestations at the seat of the hernia. (a) Cosmetic considerations. (b) Gradual increase as to size and severity of the symptoms. (c) Complications. (1) Local inflammation, pain and swelling. (2) Adhesions. (3) Strangulation.

II. Systemic pathological manifestations. (a) General inflammation of both small and large intestine causing constipation. (b) Injurious effect on the entire alimentary tract. (c) Gastritis and finally ptosis of the stomach. (d) Effects upon liver and gall bladder. (e) Effect upon



urinary tract. (f) Displacements of abdominal organs. (g) Severe irritation to the nervous system.

III. Previous preparation for operation.

IV. Statistics of mortality of a mere herniotomy as compared with an operation when strangulation is present.

#### 4. Urinary Infections; Treatment by Inoculations;

W. T. DODGE, Big Rapids.

Infections in any part of the body are attended by elimination of the infecting organism in the urine, even though the urinary passages are not diseased. In chronic cases, the kidneys are certain to become irritated and in time inflamed by the passage of the micro-organisms.

*B. coli communis* and *B. pyocyaneus* have been found by us more frequently than other germs. Old cases of bladder and kidney infection recover rapidly under inoculation with homologous vaccines. Cases presenting no signs of kidney or bladder disease, the urine containing no pus and no casts, but infected with the colon bacillus, and presenting symptoms of heart disease, and other affections have improved rapidly under vaccine therapy.

Discussion opened by A. W. Crane, Kalamazoo.

#### 5. Acute Post-operative Dilatation of the Stomach;

ALEXANDER W. BLAIN, Detroit.

Comparative rarity of reported cases. Embryology and physiology of gastro-intestinal tract. Dilatation of the stomach in animals. Experimental work on dogs. Etiology; pathology and diagnosis. Report of cases. Treatment.

### Third Session, Thursday, September 16th.

1:45 P. M.

Election of Chairman for one year and Secretary for two years.

#### 1. Mixed Toxins in the Treatment of Sarcoma, with the Report of a Successful Case;

F. W. ROBBINS, Detroit.

After a short statement of Coley's position regarding his method of treatment of sarcoma and the results, the history of a case before and after operation is given, with pathological report and exhibition of the microscopical slides.

#### 2. A Case of Sarcoma of the Ulna;

H. E. RANDALL, Flint.

General consideration of tumors of the long bones. Conservative treatment of some of the varieties classified as malignant. Report of a periosteal, spindle and round cell sarcoma of the ulna in which the entire ulna was removed with no recurrence.

Technic of removal of the ulna and the functional results. Huntington's bone transference opens up a method of operating in certain selected cases, if the diagnosis is made early.

#### 3. Final Results of Thyroidectomy for Exophthalmic Goitre;

MAX BALLIN and J. W. VAUGHAN, Detroit.

Classification of cases into (a) primary exophthalmic goitre and (b) secondary exophthalmic goitre. Mortality percentage. Improvement of different symp-

toms following operation: (1) heart, (2) nervous, such as tremor, etc., (3) eyes, (4) intestinal, (5) weight, (6) condition of blood.

#### 4. Major Amputations;

RALPH H. SPENCER, Grand Rapids.

Personal experience with major amputations, with report of eleven cases. Four cases failed to survive the amputation, because of constitutional disturbances. The causes for this were: in one case, tuberculosis; in one, diabetes; in two, chronic nephritis.

Among the cases are three of double amputation of the lower extremity, one of which was fatal, due not to the amputation, but to chronic nephritis and alcohol poisoning.

#### 5. Notes of Practical Interest in the Non-Surgical and Surgical Treatment of Crossed Eyes and Other Eye Muscle Troubles;

E. J. BERNSTEIN, Kalamazoo.

Relation between eye muscle troubles and general health. Causes. Detection, requiring great care in differentiation. Treatment mainly non-surgical. Crossed eyes, refractive, paralytic and purely muscular. Loss of function when not under proper care. Operation not indicated, as a rule, until 10th year. Tenotomies or advancement of muscles.

Discussion opened by Leartus Connor, Detroit.

### SECTION ON GYNECOLOGY AND OBSTETRICS.

PARLORS, CONGREGATIONAL CHURCH.

Chairman—F. C. WARNSHUIS, Grand Rapids.

Secretary—C. G. PARNALL, Jackson.

On account of the length of the program and in order to give every one an opportunity, the fifteen minute rule will be enforced.

The Secretary of the Section will collect all papers as soon as read.

### First Session, Wednesday, September 15th.

1:45 P. M.

#### 1. Chairman's Address;

F. C. WARNSHUIS, Grand Rapids.

#### 2. Injuries and Repair of the Pelvic Floor;

H. B. GARNER, Traverse City.

Necessity of accurate knowledge of the anatomy of the pelvic floor. Description of the levator ani muscle. Results of injury of the levator ani. Methods of repair.

#### 3. Repair of Vesico-vaginal Fistulae Through an Incision in the Anterior Vaginal Wall;

WILLIAM F. METCALF, Detroit.

Extra-peritoneal incision through anterior bladder wall. Bladder wall separated from vagina about the fistulous

opening. Removal of cicatrix and repair of opening in vaginal mucosa by continuous catgut sutures. Repair of muscular layer of bladder by the same kind of sutures. Edges of bladder mucosa approximated with No. 0 catgut. After-treatment. Cases.

#### 4. Uterine Fibroids;

R. R. SMITH, Grand Rapids.

Pathology. Illustrations of the growth of fibroids; illustrations of the degeneration of fibroids; external complications; report of cases; indications for operation; operation.

#### 5. Sarcomatous Changes in Uterine Fibroids With a Report of Nine Cases;

F. C. WITTER, Ann Arbor.

### Second Session, Thursday, September 16th.

9 TO 11:30 A. M.

#### 1. A Plea for Better Attention to the New-born Baby by the Obstetrician;

I. L. POLZKER, Detroit.

Directions and teaching about the new-born baby to mother and nurse. Careful examination at birth and frequent examinations during first weeks of life. Prevention, early diagnosis and treatment of the diseases of the new born. Encourage the mother to nurse the baby.

#### 2. Management of Placenta Previa;

E. T. ABRAMS, Dollar Bay.

#### 3. Hydronephrosis and Pus-producing Infections of the Ureters and Kidneys Complicating Pregnancy;

CLARA M. DAVIS, Lansing.

1. Report of a case. 2. Consideration of the subject in general. (a) Influence of pregnancy on the course of existing disease. (b) Pregnancy as an etiological factor. (c) Diagnosis and the importance of routine microscopical examination of the urine. (d) Prognosis and treatment. (e) Text-book teachings and recent literature regarding these diseases in pregnancy.

#### 4. The Practical Application of Physiotherapy in Gynecology and Obstetrics. A Resume of the Methods which Render Greatest Service in Medical and Surgical Gynecol- ogy;

J. H. KELLOGG, Battle Creek.

Hydriatic methods render great service in the treatment of both acute and chronic pelvic disorders. In inflammatory affections of the uterus and appendages, hot vaginal irrigation, cool rectal irrigation, fomentations, hot hip and leg packs combined with ice-packs over the affected region, heating leg compresses, hot pediluvia and general tonic applications such as the cold towel rub and mitten friction, render most excellent service.

In chronic pelvic disorders, the tonic sitz bath, sedative sitz bath, the revulsive sitz bath, hot and cold vaginal irrigation and general alternative and restorative applications, such as the vapor bath followed by the rubbing wet sheet or shower bath, are in the highest degree pro-

ductive of recovery. The arc light, the electric light bath, the photophore, the thermaphore and other measures of applying light and heat are almost equally serviceable. Electricity, massage, manual Swedish movements, graduated medical gymnastics and proper dietetic management may also be made to render service in the treatment of both acute and chronic disorders of the pelvic viscera.

In surgical cases likewise, the measures named, and others applicable to the treatment of a bed patient, may be employed to most excellent advantage in lessening pain, thus obviating the use of narcotics; in peritonitis, wound suppurations, and other complications; and in hastening convalescence.

Adjournment to General Session at 11:30 A. M.

### Third Session, Thursday, September 16th.

1:45 P. M.

Election of Chairman for one year and Secretary for two years.

#### 1. The Internal Secretion of the Ovary; Its Application in the Treatment of Disturb- ances of Artificial and Physiologic Meno- pause;

W. H. MORLEY, Detroit.

Early use of animal extracts. The theory of internal secretions. Reciprocal action of the glands with an internal secretion. Experimental work on animals to show that ovarian extract is toxic to the male, and that the general metabolism is diminished after castration or especially that the removal of the ovaries causes a less excretion of phosphoric anhydride. Report of cases in which ovarian extract or extract of corpus luteum has been used. Results. Conclusions.

#### 2. A Clinical and Pathological Study of over One Hundred Cases of Large New Growths of the Ovary Benign and Malignant, (30 min- utes);

REUBEN PETERSON and N. N. WOOD, Ann Arbor.

The cases will be grouped according to their pathologic findings, and then the different groups will be studied as to the frequency with which these tumors occur, also as regards prognosis and the best modes of treatment. Especial emphasis will be laid upon the differential diagnosis of the tumors of the different groups. The pathologic findings will be carefully tabulated and conclusions drawn from these findings.

#### 3. Hydatidiform Mole;

GEORGE KAMPERMAN, Ann Arbor.

Historical note. Report of a case of five months' development with rather marked symptoms of toxemia. Also symptoms simulating placenta previa. Treatment by curettage. Sappremia. Recovery.

Discussion of case with reference to etiology, symptoms, diagnosis, treatment, prognosis.

#### 4. The Crime of Neglecting Cases of Uterine Cancer;

J. H. CARSTENS, Detroit.





Kent—W. J. Du Bois, Grand Rapids, and  
S. I. Rozema, Grand Rapids.  
J. C. Kenning, Grand Rapids, and  
J. D. Hastie, Grand Rapids.

Lapeer—S. A. Snow, North Branch.  
G. W. Jones, Imlay City.

Lenawee—O. Whitney, Jasper.  
I. T. Spaulding, Hudson.

Livingston—W. C. Huntington, Howell.  
J. E. Browne, Howell.

Maconib—James Yates, Roseville.  
Robert Greenshield, Romeo.

Manistee—Harlan McMullen, Manistee.  
H. D. Robinson, Manistee.

Marquette—J. H. Andrus, Negaunee.  
R. A. Burke, Ishpeming.

Mason—

Mecosta—L. S. Griswold, Big Rapids.  
J. B. Campbell, Stanwood.

Menominee—

Midland—

Monroe—P. S. Root, Monroe.  
C. T. Southworth, Monroe.

Montcalm—J. O. Nelson, Howard City.  
W. H. Belknap, Greenville.

Muskegon—F. W. Garber, Muskegon.  
J. D. Buskirk, Shelby.

Newaygo—Charles Long, Fremont.  
G. W. Nafe, Fremont.

Oakland—E. A. Christian, Pontiac.  
M. W. Gray, Pontiac.

O. M., C. O., R. O.—C. C. Curnalia, Roscommon.  
W. G. Young, Gaylord.

Ontonagon—W. B. Hanna, Mass.  
A. L. Swinton, Ontonagon

Osceola—A. Holm, Le Roy.  
H. L. Foster, Reed City.

Ottawa—F. B. Smith, Coopersville.  
J. A. Cousins, Douglas.

Presque Isle—V. W. Shirley, Onaway.  
F. P. Nevins, Posen.

Saginaw—W. J. O'Reilly, Saginaw.  
B. B. Rons, Saginaw.

Sanilac—J. A. Fraser, Lexington.  
H. H. Learmont, Croswell.

Schoolcraft—C. M. Livingston, Manistique.  
Andrew Nelson, Manistique.

Shiawassee—E. E. Ward, Owosso.  
W. L. Parker, Corunna.

St. Clair—C. B. Stockwell, Port Huron.  
W. B. James, Marysville.

St. Joseph—F. C. Kinsey, Three Rivers.  
L. K. Slote, Constantine.

Tri—V. F. Huntley, Manton.

Tuscola—

Washtenaw—W. F. Breakey, Ann Arbor, and  
Reuben Peterson, Ann Arbor.  
J. A. Wesinger, Ann Arbor, and  
C. G. Darling, Ann Arbor.

Wayne—	Delegate.	Alternate.
	A. P. Biddle,	Leartus Connor,
	C. W. Hitchcock,	R. Hislop,
	A. D. Holmes,	P. J. Livingston,
	F. W. Robbins,	G. E. McKean,
	B. R. Shurly,	M. V. Meddaugh,
	F. B. Tibbals,	R. E. Mercer,
	V. C. Vaughan, Jr.,	F. D. Summers,
	Wadsworth Warren.	F. B. Walker.

## COMMERCIAL EXHIBIT, KALAMAZOO MEETING.

Space No. 1—Fairchild Brothers & Foster, New York.

Space No. 2—Globe Mfg. Co., Battle Creek, Mich.

Space No. 3—Horlick's Malted Milk, Racine, Wis.

Space No. 4—

Space No. 5—Mellin's Food Company, Boston.

Space No. 6, 7, 8—Truax, Greene & Company, Chicago.

Space No. 9—The Upjohn Company, Kalamazoo.

Space No. 10—Smith, Kline & French Company, Philadelphia (Eskay's Food).

Space No. 11—

Space No. 12—O. F. Schmid Chemical Company, Jackson, Mich. (Pharmaceuticals).

Space No. 13—

Space No. 14—

Space No. 15—The Charles H. Phillips Chemical Company, N. Y.

Space No. 16—D. Appleton & Company, New York, Chicago. (Subscription and Medical Books).

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### Hotels.

The Burdick, capacity 175, \$2.50 to \$4.50 American Plan.  
 The American, capacity 150, \$2.00 to \$3.50, American Plan.  
 The Rickman, capacity 125, \$2.50 to \$4.00, American Plan.  
 The Columbia, capacity 60, \$2.00, with bath, American Plan.  
 The Berghoff, capacity 35, 50 cents to \$1.00, European Plan.

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### Garages.

Russell, Hoague & Albrecht, 425 E. Main St.  
 Buick Garage, 308-312 E. Water St.  
 Dallas Boudeman, 310 N. Burdick St.  
 Burdick Garage, 118 W. Water St.  
 George Boyles, 107 N. Church St.  
 C. H. Bemenderfer, 115 Eleanor St.  
 Ralph Motter, 718 S. Burdick St.

Storage rates will be 50 cents a day; washing and polishing, 50 cents to \$2.00, according to the amount of work.

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### Genius and the Last Born.

Contrary to the generally accepted dictum that geniuses have been the first born of their parents, the *Medical Times* gives the following:

"Coleridge, the last of thirteen children; Cooper the eleventh of twelve; Washington Irving the last of eleven; Balzac the last of three; George Eliot the last of four; Napoleon the eighth and probably the last of his family; Daniel Webster the last of seven; Franklin the last of seventeen and the last born of the last born of several generations; Rembrandt the last of six; Rubens of seven; Landseer was the fifth of seven; Von Weber the ninth; Wagner the last of seven, as also Mozart; Schumann the last of five and Schubert the thirteenth of fourteen.

### Pregnancy and Phthisis.

Neitner has collected, in a Strassburg thesis, 27 severe and 34 milder cases of tuberculous pulmonary phthisis detected in a series of 5,720 pregnant women. In 41, or 67 per cent., of the cases, the lung symptoms grew worse during pregnancy. In every case where the larynx was involved the patient's condition became aggravated in the puerperium. In 18 cases pregnancy was interrupted by an obstetric operation; in 3 by Cesarean section, for pelvic contraction in 2, and for cancer of the cervix in the third; in 8 by induced abortion, and in 7 by induction of premature labor. In 16 abortion or premature labor occurred simultaneously.—*Z. f. gyn.*

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### The Calmette Reaction—Take Your Choice.

We are convinced that the ophthalmic reaction as directed to be practiced by Calmette and others it is of undoubted service in the diagnosis of tuberculosis. In no case where its worth could be tested clinically by the finding of the tubercle bacilli did we fail to obtain decided ocular manifestations following the instillation of the tuberculin. This reaction did not follow when instillations were made in the case of one hundred and twenty-six individuals affected with diseases other than tuberculosis. It was not obtained in seventy-four apparently normal adults.—*Physician and Surgeon.*

Although present indications seem to declare the inutility of the ocular reaction in tuberculosis it is certainly all too soon to forsake it for some new and equally unknown fetich which might lead us even farther into the marsh land than does this uncertain light which we are now watching so intently.—*New York State Journal of Medicine.*

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Owing to their studious habits and their lack of proper physical exercise, Chinese students both in this country and in their native land are especially liable to tuberculosis.

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The chief causative factors in peripleuritic abscesses are actinomycosis and typhoid osteomyelitis. A careful history as to a previous typhoid and a thorough microscopic examination of the pus should be secured.—*Am. Jour. Surg.*

## Progress of Medical Science

### SURGERY.

Conducted by

C. S. OAKMAN, M. D.

**The Treatment of Tetanus** has received considerable attention in the literature this summer. Among important articles are those of HESSERT in *Merck's Archives* and of Hutchings in *Surgery, Gynecology and Obstetrics*.

HESSERT puts down the period of incubation arbitrarily as under ten days in the acute cases, and over ten days in the sub-acute and chronic forms. The reason that treatment is so unsatisfactory is because the diagnosis cannot be made until after the toxin is intimately bound up with the nerve cells. Hence the best treatment is the prophylactic use of the antitoxin.

The indications in cases of developed tetanus are: (1) Remove the source of further toxin supply by proper local wound treatment. (2) Neutralize the toxin which may be contained in the tissue juices by massive injections of antitoxin subcutaneously. (3) Employ some remedy to allay the reflex excitability of the spinal cord; e. g. the subarachnoid injections of magnesium sulphate. (4) Nourish and support the patient. Antitoxin in spite of its great experimental efficiency in animals, and its undisputed value as a prophylactic has so far proved extremely disappointing as a curative agent, when the disease is fully developed. The reason can be readily appreciated when it is borne in mind that antitetanic serum, no matter how administered, can neutralize only that portion of toxin free and uncombined in the blood and lymph. It is immaterial how it is given, it circulates in the blood, neutralizes the toxin there and the surplus is excreted. None of it reaches the nerve cell where the toxin is locked up and therefore, if there is already a fatal dose of toxin in the nervous system when the case is first seen, no treatment will be of any avail. Statistics have shown: (1) That the mortality of tetanus has not been lowered by serum treatment and (2) that no special form of injection has any advantages over the subcutaneous, some methods being futile and sometimes positively dangerous.—*Merck's Archives*.

#### **The Treatment of Tetanus by Chloretone.**—

HUTCHINGS, of Detroit, has apparently made a most valuable contribution to a most important, practical subject. His paper read at the meeting of the American Surgical Association, in June, gives the details of six cases of developed tetanus treated with chloretone.

The indications in treatment are: (1) Remove the source of toxin supply, either by local disinfection or by amputation. (2) Neutralize the toxin present in the circulation, i. e., that portion not yet combined with the cells of the nervous system. This can be accomplished by the injection of sufficient quantities of antitetanic serum. This is all the serum will do. It does not affect the nerve cell combination nor inhibit the growth of the organism. (3) Patient must be kept alive until the body can overcome the effects of the toxin. Death results from one of two causes, either, (a) the amount of the toxin is so great that it directly affects a weak heart or the vital centers in the medulla, causing death within a few hours, or (b) death results from exhaustion following prolonged and severe muscular contractions. In the former class, practically all will die. Treatment is more hopeful in the latter class.

It is the object then of the treatment to control muscular activity, for the intense muscular contractions may prove fatal either directly or indirectly—directly, by asphyxia, or indirectly, by the production of overwhelming amounts of katabolic products. Moreover, it is frequently impossible to give sufficient nourishment.

Numerous drugs have been used to control muscular contraction. With McClintock, the author made a comparative study of these agents and came to the conclusion that chloretone is the best substance for this purpose.

Hutchings has had six patients who were thus treated, one mild case, one moderate, three severe and one fulminating. Of these five recovered and one, the case of the fulminating type, died. The details of the treatment should be read to be appreciated. The essentially new point is that chloretone is given in 30 to 60 grain doses, dissolved in whiskey, if given by the mouth or warm olive oil if given by the rectum. Elimination is hastened through the administration of copious saline enemata and by keeping the bowels open. The local wound is given careful attention and the serum administered to neutralize the circulating toxin, which has not yet combined with the nervous system.

The chloretone should be given in sufficient doses to control the convulsions.—*Surgery Gynecology and Obstetrics*, July, 1909.



## GYNECOLOGY AND OBSTETRICS.

Conducted by

B. R. SCHENCK, M. D.

**The Utility of the Vaginal Douche.**—BYRON ROBINSON discusses at considerable length the results to be obtained from and the method of employing the vaginal douche. He describes the blood supply to the pelvic organs and states that the reason douches are of benefit is because the heat dilates the blood vessels and an increase in the amount of blood to a part means the healing of disease, according to the axiom that "living, flowing blood cures disease."

The explicit directions for use are as follows:

A. The fountain syringe *reservoir* for the vaginal douche should be of 12-quart capacity. The simplest and most economical vaginal syringe is a 12-quart wooden pail.

B. The *location* of the syringe should be four feet above the patient.

C. The *quantity* of fluid administered in the beginning should be 2 quarts for patients unaccustomed to its use, and 4 quarts for those accustomed to its use. The quantity should be increased a pint at each administration to 12 quarts.

D. The *temperature* of the douche should be 105° in the beginning and increased one degree at each administration until it is as hot as it can be borne (115 to 120°).

E. The *duration* of the douche should be 10 minutes for each gallon.

F. The *time* to administer the douche is in the evening immediately before retiring and in the morning (after which the patient should lie horizontally for 45 minutes).

G. The *position* of the patient should be on the dorsum.

H. As to the *method* of administering the douche the patient should lie on a sufficiently inclined plane to allow the returning fluid to drain into a vessel (pail, pan). The ironing board, washtub, or board resting on the bath tub conveniently serves the purpose. The douche should not be administered in the bed (unless ordered) nor in the standing or sitting posture or on the toilet seat.

I. As to *ingredients* a handful of sodium chloride (NaCl) and a half teaspoonful of alum should be added to each gallon, the sodium chloride to dissolve the mucus and pus, to act as

a natural antiseptic and to prevent reaction. The alum is to astringe, check waste secretions and indurate tissue.

J. The *vaginal tube* employed in administering the douche should be sterilized, boiled, and every patient should possess one. The most useful vaginal tube is the largest that can be introduced or the one that distends the vaginal fornices the greatest, so that the hot fluids will bathe the widest surface area of the proximal or upper end of the vagina—the most adjacent to the uterine vessels (arteries, veins, lymphatics).

K. The *utility* of the vaginal douche is: (a) it stimulates contraction of tissue (muscle, elastic and connective); (b) it stimulates the contraction of vessels (lymphatics, veins and arteries); (c) it absorbs exudates; (d) it checks secretion; (e) it is a stimulant; (f) it relieves pain; (g) it cleanses; (h) it checks hemorrhage; (i) it curtails inflammation; (j) it drains the tractus genitalis. The usefulness of the vaginal douch depends on the quantity of fluid, the degree of temperature, its composition, the position of the patient during administration, and on systematic methods of employment.

L. *Disinfectants* in a vaginal douche are secondary in value to solvents of mucus, pus, leucocytes (sodium chloride).

M. The *objects* to be accomplished by a douche are: (a) The dissolving of the elements in the discharge, as mucus, pus and leucocytes; (b) the mechanical removal of the morbid secretions, accumulations, and foreign bodies; (c) antiseptics; (d) diagnosis.

N. The *requirements* of a douche: (a) it should be non-irritating; (b) it should be a transparent solution; (c) it should possess solvent powers of pus, and especially mucus; (d) it should be continued for months; (e) it should be omitted for three days during menstruation.

O. A vaginal douche given according to the above directions, will prove to be of therapeutic value, in the treatment of pelvic disease, a prophylactic agent, and a comfort to the patient.

P. The vaginal douche is contraindicated in subjects with oviductal gestation or acute pyosalpinx (as it is liable to induce rupture of the oviductal wall), abortion or leakage of pus through the abdominal oviductal sphincter.—American J. Surg., July, 1909.

## PATHOLOGY AND BACTERIOLOGY.

Conducted by

C. E. SIMPSON, M. D.

**The Transmission of Infectious Diseases.**—The health officer of the port of New York, Dr. A. H. Doty, presents arguments opposing the belief that infectious diseases are commonly transmitted by clothing, baggage, rags, money, etc. He calls attention to the change of opinion that has taken place in regard to certain definite diseases. For example yellow fever was until quite recently believed to be transmitted by fomites; we now know it is borne by mosquitoes only. The same change of opinion has taken place in regard to bubonic plague. Fleas which infest rats are now considered responsible for its communication rather than clothing and rags.

The author believes that smallpox, typhus fever, measles and scarlet fever are seldom if at all conveyed through the medium of clothing, especially that of a well person. That clothing which has been laid away for years may act as a medium of infection when exposed or that a disinfected room may, months later, give rise to infection, he considers quite improbable. The instances in which such has seemed to be the case would, if carefully investigated prove to be due to direct contact.

The possibility that rags used for commercial purposes transmit disease is a favorite theory and has received long and careful attention at the hands of Dr. Doty. Besides his researches in this country he investigated the subject in Egypt. Here the rags, consisting principally of the worn-out garments of the natives, which garments are worn next to the skin, would seem to afford very favorable opportunity for the spread of any infectious disease. Still the statistics of the sanitary authorities showed not the slightest evidence that the men, women and children who were constantly in contact with these rags in the sorting room were more prone to infectious diseases than those following other pursuits.

Paper money is often regarded a common means of infection. In the Treasury Department at Washington where the clerks are constantly handling enormous quantities of old and filthy money there is no proof that this article is a medium of infection. The clerks contract infectious diseases no more frequently than do other people. After a careful bacteriological investigation, Mr. Hilditch of the Sheffield Labora-

tory of Bacteriology and Hygiene concludes: "From the observations that I have made it would seem that the bacteria present on paper money are non-virulent, and that the forms most present are the air forms. One conclusion that may be drawn after a careful study of this subject is that money constitutes an unimportant factor in the transmission of disease."

With regard to the cargoes of vessels the custom of the New York Quarantine Station is not to disturb them even when infectious diseases are found on board. Not the slightest evidence has been presented to show that this policy has in any way contributed to the extension of such diseases.

Though clothing and rags have been regarded so long as the means for the dissemination of disease, the real danger from the discharges of the respiratory and alimentary tracts has too frequently been overlooked. Our attempts at disinfecting these discharges are often quite useless. Disinfecting solutions affect only the superficial parts and powders are not effective. Boiling or burning all discharges is the only sure method of destroying all germs.

The fomites theory should not be considered as accounting for the ordinary spread of disease but as explaining unusual cases. No one who has had long experience with infectious diseases can doubt that almost any article can under some circumstances transmit disease, but the application of this possibility to all instances leads to a failure to discover the true cause in most cases. Infectious diseases are usually transmitted directly from the sick to the well. Recognition must at the same time be given to those carriers of disease who harbor within their bodies pathogenic germs, such as those of cholera, diphtheria, and typhoid, without themselves showing any symptoms of the disease. Mild, ambulant or unrecognized cases constitute one of the most common dangerous factors with which we have to deal.

Contact of the sick or their discharges with the well, the recognition of insect borne diseases and of apparently well disease carriers leaves very little to be accounted for by the fomites theory.—*The American Journal of the Medical Sciences*, cxxxviii, 30.

## NEUROLOGY.

Conducted by

C. W. HITCHCOCK, M. D.

**The President's Address at the American Neurological Association.**—That Nestor of American Neurology, Dr. S. Weir Mitchell, although eighty years of age, has given new proof of his still virile mind, in his recent address as President, to the association composed of many of America's best neurologists. He mildly chides them upon the rarity in their proceedings of matters of therapeutic interest, admitting that this is the triumphant hour of diagnosis, which after all is the parent of therapeutics. He deplores the stand-still to which he thinks we have come in the treatment of insanity and bewails the elusive changes in mental maladies which even yet escape the ken of the pathologist.

He then suggests numerous problems worthy of careful study. For the physiology and pathology of the negro he asks as careful study as has been given his anatomy. Just why he is so comparatively immune to chorea, and why, in spite of his comparatively frequentluet infection, he is so seldom the subject of tabes, it would be interesting to know. The physiology, too, of individuals who have lost large parts of the body by multiple amputation offers an interesting field for careful research.

But still more important is our frankly confessed ignorance concerning the nature of the excitatory impulse. He regards it as unfortunate that some of the masters of physics have not studied in both animal and plant transmissions of energy, in comparison with the exterior forms of physical energy, with which they are more familiar.

He cites the existence in the higher animals of ganglionic store-houses of potential energy which may become kinetic, through nerve tracts and muscles. The rate of transmission of nerve energy is quicker, the finer the organization; its centrifugal rate in the higher vertebrates being about 100 feet per second and its centripetal rate being about 150 feet per second. He suggests the probability of an altered rate in disease, a subject practically unexplored. "Is the speed slower in some asthenias?" he asks.

As to out-going energy, he distrusts the long accepted conclusion that the nerves themselves do not exhibit fatigue, by any failure to respond to any electric excitation as does not impair their

integrity, but he adds, "we are far from knowing whether the normal energy of the will may not so exhaust them." In any asthenia we should be able to diagnose the weakness as muscular, neural, or ganglionic.

Our laboratories as yet fail to find proof of chemical changes accompanying the transmission of neural energy along nerves, nor can they detect during the most violent functional excitation of a nerve any rise in temperature. What is the nature of the molecular disturbance we call nerve energy? Nerves do not, like wires, leak energy and it is not known that a nerve in action affects by induction a nerve beside it.

This suggestive author asks whether the transmission of impulses and excitation is only a mode of physical energy or whether it be by chemical interchanges which are the parent cause of the electric phenomena. Our present views are so tentative as to lack the helpfulness for which we might hope if the nerve impulse could be proven to depend on minute and essential saline interchanges.

Dr. Mitchell is of the opinion that new studies should be inaugurated of that form of excitatory impulses which is found in plants and which he thinks probably identical with that observed in animals. The likeness of the two is striking, and though it has been more or less investigated in the vegetable kingdom, chemical explanation seems to have been but little considered.

The sensitive mimosa with its quick responses, is startlingly suggestive. Forms of energy in plant life are more open to observation than their animal analogue and "whether here too in the animal, as the muscle shortens, there be any hydraulic interchange, is perhaps worth a thought."

Dr. Mitchell leaves untouched the assertion by Bosc that all plants have nerves. Leaving an imperfectly summarized subject, he throws out some suggestions as to problems of the reflexes, their reinforcement, and how these latter act, since we are as yet ignorant of the tracts by which motor and sensory reinforcements reach the spinal centers.—*Jour. of Nerv. and Mental Dis.*, July, 1909.



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### THE PRESIDENTIAL ADDRESS FOR 1909.

#### THE PHYSICIAN: HIS DUTIES AND RELATIONS TO THE PROFESSION AND TO THE PUBLIC.\*

A. I. LAWBAUGH, M.D.,  
Calumet.

Goethe's saying that "Medicine is the most God-like of all the pursuits of man," applies to the medical profession of all ages. In its earliest history closely allied with that of religion, it is quite credible that medicine, in its primitive form, is the most ancient of the professions. Before man began to think of his soul, the needs of the physical body must have made their appeal to him, and primitive medical methods must have evolved out of his consciousness of the wounds and bruises incurred in his struggle for existence. With the passing of the ages, there developed the *Physician*, as the present day knows him, a man set apart for the healing and cure of the ills of the flesh, devoting his life to the battle against disease, either in the treatment of the sick individual or in the combating of epidemics. He goes farther than this—not satisfied merely with the fighting of existent disease in the patient or the community, he looks to the preven-

tion of future ills by outlining broad plans for the conservation of human life and energy, by educating and inspiring the public to the enactment of pure food laws, the protection of water supplies, extermination of parasites and disease-bearing insects, the conquest of the Tropics, the regulation of child-labor, the protection of sex-relations, the fight against tuberculosis and the venereal diseases, and the enforcement of general hygienic measures.

The physician has, therefore, evolved from the mere *treater* or *healer* of disease to a more complex position, including the *preventer of disease*. Truly, Goethe's saying becomes even more applicable at the present day; medicine is the noblest of all callings. For such a lofty and noble calling an especial education and training are necessary, but these must not be too narrow and specialized. The modern physician must know life in all of its phases—he must have the knowledge of the mainsprings of human action. He cannot content himself with a knowledge of anatomy, a

\*Read at the Forty-fourth Annual Meeting of the Michigan State Medical Society, Kalamazoo, September 15, 1909.

little pathology, more symptomatology and still more materia medica and surgery. To fulfill his function—to be of best use to the community, he must possess a knowledge of all things that may benefit the community aside from the mere matter of treating the sick individuals. He must lead men to right living because it is the way to long life and health. He must have the knowledge of human nature as revealed in history and the world's great literature, he must know psychology, sociology, and political economy, and he must be a past master in the province of hygiene and sanitation. He must be able to understand the spiritual requirements of his clients, and in this way to offset their inclination to turn to false gods, such as Christian Science, the Emmanuel Movement, and other forms of so-called "mind-cure."

Such is the modern demand made upon the physician and the one who does not respond to it—who still thinks his only duty is to see a patient, make a diagnosis and then write a prescription—is sure to be left behind. Great is the calling—great are the demands made upon those who enter it! Unfortunately, too often we see in the practitioner a failure to comprehend the lofty nature of his profession. Either because of his own spiritual or mental inability, or his failure to arise above what seems to him to be the legitimate "business" side of the practice of medicine, he loses all sense of his higher responsibilities and degrades his profession to the level of a trade. As a result he adopts all the evil methods of modern trade-competition. His colleagues he comes to regard as competitors or rivals in a business way. He stands apart from them, often with a bitter feeling of jealousy or injury, and goes on alone in his medical business, without the inspiration and help that should come from spiritual and intellectual association with his professional

brothers.

For medical men to be of the greatest value, not only to the profession, but to the community at large, there must be organization; and co-operation as manifested in organization cannot be too highly emphasized. It is especially my purpose at this time to speak of this phase of the medical profession. In practically all walks of life, professional as well as industrial, organization has become the watchword by which everything of any account has been accomplished. To secure the greatest effectiveness, each individual must relinquish his own personal interests and unite in the one absorbing and dominating idea for the advancement of which the organization has been formed. All unworthy feelings of rivalry and competition should be abandoned. From the union of the sentiment and influence of the individual units there should result one great irresistible force—one great unit of sentiment and purpose.

The basis of medical organization cannot be better expressed than in the following ideals of the Litchfield County, Connecticut, Medical Society, adopted in 1784, but as vital and as pertinent today as they were over a century ago:

1. To lay a foundation for that unanimity and friendship which is essential to the dignity and usefulness of the profession.
2. That in all cases where counsel is required they will assist each other without reserve.
3. They will communicate their observations on the air, seasons and climate, with such discoveries as they may make in physics, surgery, botany or chemistry, and deliver faithful histories of the various diseases incident to the inhabitants of the country with the mode of treatment in singular cases.
4. To appoint a committee for the purpose of correspondence with neighboring medical societies and in Europe.

The establishment of a weather bureau and the enactment of laws concern-

ing the observation of the weather and all meteorological phenomena, as well as the general distribution of medical knowledge through the medium of medical journals, have made some of these aims obsolete, but it is the general spirit and lofty ideal animating them that make their quotation worth while.

The first and chief essential in the organization of a medical society is the laying of a corner-stone of unity and friendship. These things are necessary if the profession is to be a useful and dignified one. It is unfortunately true that there are many black sheep within the medical fold, and that strife and contention seem to be the very life of the practitioner. Too often, he lets his angry passions rise against his professional brother, forgetting that the members of this noble calling should in all ways exemplify the brotherhood of man. A well-conducted medical society should represent a clearing house. Viewed from its vantage ground we may often find that a colleague upon whom we have looked with suspicion and distrust is after all a *man* with good qualities sufficient to make him a fit associate in the good fellowship and friendly intercourse of daily life.

Some physicians do not join a medical society, believing that they have nothing to gain by attending a meeting and hearing a colleague read a paper upon some subject which they think they can obtain from the books of their own library, perhaps elucidated in a more convincing manner. To a certain extent this is true, but rarely does the side-light thrown upon a question by another human mind fail to be of interest. Osler's remark applies here: "The man who knows all and gets nothing from the society reminds one of that little dried-up miniature of humanity, the prematurely senile infant, whose tabetic marasmus has added old age to infancy." It is in the discussion and the interchange of views that

the greatest good comes. While the fostering of good fellowship among its members is one of the prime objects of a medical society, the free interchange of thought—the stimulation of mental activity by the friction of mind against mind engaged in the same line of work, is of greater value still. The friendly and unrestricted discussion of a subject cannot but result in great mutual benefit. To no one is this of greater importance than to the young practitioner, who in the beginning of his professional career may, if his hours are not fully occupied, fall into the vice of intellectual laziness. Without specific objects of work he may fritter away his time in the reading of useless literature or in association with companions, who not only do not give him stimulating ideas, but often assist him in wasting his time. Once started on this road, in a short time he may know less and be a less valuable member of the community than when he received his sheepskin and entered upon his professional life.

By becoming a member of a medical society and entering freely into the discussions the mind of the young practitioner will soon become awakened to the fact that there is still much for him to learn. I have been told by younger colleagues that until they had attended the society and had become interested in a subject that lead them to search and study the literature they had not thought that so much had been written on various medical subjects. The experiences of older medical literature, when once opened up to the seeker after knowledge, are often wonderful revelations to the young practitioner. Again I may quote Osler: "The society should be a school in which the scholars teach each other." The meetings of the society should be arranged to prove the truth of this assertion. A great responsibility lies upon the shoulders of every program committee. Vital subjects should be chosen for



papers and discussion, the program must be made a live one and an attractive one for each and every meeting.

There are also men who do not attend meetings or who refuse to join a society for the ignoble excuse that they are "too busy" or "may miss a case." The physician who looks upon his profession as a mere financial work degrades his profession and cannot have any of the high and noble qualities and aspirations that should distinguish the members of a profession who give their lives to the saving of others. Such a man has no place in the practice of medicine. He should enter a business career where the responsibilities of human life and happiness are not placed upon his shoulders as his sacred duty, to be borne to the end. The laborer is worthy of his hire, and I cast blame on no man for reaping the just reward of his labor, but we may ask: "If pecuniary reward had been the only incentive for medical work, what progress would have been made?" Had money been the only incentive in the case of Jenner, Virchow, Pasteur, Koch, Ehrlich and many other epoch-making men in the wonderful development of preventive and curative medicine, how little public good would have been accomplished and how few would have reaped the benefit of their work! Should we adhere to this mercenary view, instead of raising our banner of ideals, of loyalty to principles and that genuine *esprit de corps* which is so essential to the dignity and usefulness of our profession, would there be any reason why the public should not point at us the finger of scorn and contempt?

The medical society should inculcate the principle that there is honor only in marching under the flag which represents all that is honest knowledge furnished to us by pure science. It is, however, a notorious fact that not more than one-third of the physicians in this country are members of a medical society.

There are many guerillas and it should be the aim of the society to bring them into the lines of order and regularity. Every practitioner should take pride in assisting to create and cement the great organization of medical men as exemplified in the American Medical Association, and to do this he should take pride not only in his local society, but in becoming a member of the State and National Associations. Only in such complete organization can the medical profession achieve its greatest effectiveness. Such an aggregate power of combined medical influence of a community, state and national associations can be exerted for good in divers ways, especially in educating and moulding public opinion as to the value of medical thought in our public councils, national and state legislatures, in the enactment and enforcement of public health laws. To bring this about requires painstaking organization and united effort to secure the membership and co-operation of all medical men and thereby to impress not only the public at large, but also emphatically to show and demonstrate to our legislatures that we are a united profession and that our work is essentially for the conservation of human life. Perhaps some may think that this great work to be accomplished, especially in hygiene and preventive medicine may help to reduce disease and thereby the earnings of the physicians. As to the first result, we hope it will be brought about speedily—as to the second one, the physician who is abreast of the intellectual movement of his time, who realizes the transformation coming over his profession, from an art or science of *healing* to a *science of prevention* will have no fears that he will be left financially wrecked. There will be work enough for him to do in *prevention*. Even were it not so, the best of our profession would show the true spirit of humanitarian unselfishness to bring about a condition which will not only

improve the general health, but prolong the average human life.

There are certain great public duties that are ours by right, and it is surprising to note how few of us take an active interest in anything except the bare practice of our profession. Few of the physicians of my own county take any part in public affairs, and what is true of it, is, I believe, also true of every other county in the state. The physician must not forget that he is a citizen of the commonwealth and as such has duties to perform for the elevation and good of the community in which he resides. At this stage of the world's progress, no man can live for himself alone, he is bound in a thousand ways to the community and must do his share in furthering the common good. A failure to comprehend this means a failure in the highest things of life.

In great movements affecting the nation as a whole, the physician may find a proper field of action. Already through the united stand and efforts of the profession, as exemplified in the acts of the American Medical Association, much useful and judicious legislation has been put in force by both federal and state legislative bodies. The physician has come to be also a maker of laws. In all matters concerning the physical health of the nation his expert knowledge and specialized training become necessary to the proper and intelligent framing of health laws and their enforcement. This has been well expressed by the attorney general of the United States, as follows: "Through the action of physicians has come about much advantageous legislation. I might refer, as an illustration, to the regulations regarding proper drainage, quarantine of persons infected with contagious diseases, besides the passing of the act prohibiting the sale of adulterated and poisonous drugs and foods. But for the work of the physicians many of these acts would never have been real-

ized. Had it not been for the results of the scientific research of physicians the digging of the Panama Canal would probably have been impossible, because of the fever and other diseases that made living on the Isthmus impossible for those engaged in the work."

This high tribute paid by an intelligent layman shows the decided influence of education along proper lines. When the time comes, as it most surely will come, when the general public becomes so educated to a comprehension of this truth, the physician will assume a large share of the responsibility in the enactment and proper execution of laws designed for the protection of the public. In the past many general practitioners as well as many able and scholarly leaders in the profession have failed to enter the trenches in battles for civic good and general welfare. Such delinquents in their higher duties must come to be regarded with suspicion by a public that is rapidly becoming educated to a knowledge of those things.

In municipal affairs the physician must also take his share as a citizen upon whom certain peculiar responsibilities rest. In matters of local health conditions he should take an active, even an aggressive part. What a paltry excuse is often offered for failure to perform these duties—that of interference with professional work and the possible loss of a patient! Is there any one of us who could not, by putting on just a little more pressure, do these things, too, as well as the daily work coming into our hands! The physician who cannot is of poor stuff, indeed! The public must be educated in matters of hygiene and in the prevention of the infectious diseases; it is *demanding* such education. The scientific members of our profession have told it that the infectious diseases are not inevitable, that they are unnecessary and preventable. Will such an appeal to the self-interest and common-sense of



the laity be met with indifference? Who then will be the leader in the work of more fully instructing the public—the physician, the legitimate leader, or will it pass into the hands of the laymen themselves? Such striking lessons in the restriction of epidemics have been already learned by the public, as in the case of the excellent work done by the Public Health and Marine Hospital Service in the eradication and prevention of yellow fever and bubonic plague, that even in communities where the necessary restriction of communication was at first bitterly resented on the ground of infringement of the rights of the individual and state, such opposition has been replaced by an intelligent co-operation and appreciation of the results obtained and the measures necessary thereto.

In the education of the public along the lines of general hygiene and sanitation the public schools should become an object of the physician's solicitude. Proper school inspectors should be provided, suitable text-books on hygiene recommended, talks and lectures given to school children, etc., and in the intelligent carrying out of these measures it becomes essential that there should be on every school board a physician whose advice should be sought and taken in all those matters in which he alone is best qualified by the peculiar virtue of his professional training.

The public must also be taught the value of hospitals in the treatment of the sick, and their value in the restriction of disease. As an example showing the necessity of such enlightenment, many of you no doubt know that in a neighboring city the offer of a large sum of money by a public-spirited individual for the erection and endowment of a hospital for contagious diseases of children was opposed by the residents who invoked the law to prevent its erection on the ground of danger and depreciation of property values. A similar false argu-

ment prevented the establishment in 1895 of a tuberculosis hospital in connection with the university at Ann Arbor.

The conquest of disease depends upon the education of the public, and the most important question of the day is that concerning the best method of inculcating such education. Aside from the instruction of children in the public schools, the press is beyond doubt an invaluable avenue of education through which the lay public may be reached. The success of *nostrum venders* is an evidence of the keen interest shown by the great mass of the people in all things medical. The matter of educating the people in medical matters by the aid of the daily press and popular magazines should not be taken up indiscriminately by members of the medical profession, but should be left to such men as are empowered by special training and experience to speak with authority on a given subject, and who will give nothing but the absolute truth as known to science. Likewise, great discrimination in the selection of subjects should be exercised. The press matter should be in plain and simple language and should be restricted to a discussion of the significance, etiology, prevention and general hygiene for a given disease. Treatment should not be discussed. Mooted medical subjects should not be exploited at all, as the result would be the giving of unsettled views to those who are not capable of using proper judgment or discrimination. For example, consider the immense harm done by the injudicious and wholly unwarranted articles on the use of trypsin in cancer published in one of the leading popular magazines. The question has also been widely discussed as to whether it would not be better to have such communications to the public through the press, prepared by skilled lay writers having the art of presenting a subject in an attractive manner. To such writers the sources of information



should be freely opened, but such productions, it is needless to say, should be carefully criticised and edited by medical men. We have seen during the last several years too much of the evil results of the layman's discussion of certain medical subjects.

Crile says in a recent address: "From my investigation I am satisfied that the press would welcome co-operation on professional matters. I believe, indeed, I have been told that the press would be glad of reasonable medical news supervision by a responsible physician or committee of such, a committee which would pass upon both contents and form of press items affecting our profession and advise the local dailies as to the probable effects of such 'news' upon the public and profession. Much harm could be prevented and much good could be accomplished. Or would it be still better to have an accredited medical editor attached to each paper?" I believe the proposition should have the careful consideration of the profession in the endeavor to instruct the public through the press, admittedly one of the most potent means available.

When an infectious disease occurs in a family, knowledge concerning such disease, its hygiene and prevention, should be supplied to the members in the form of pamphlets and circulars of information prepared by the local or State Board of Health. The family physician should be given the first opportunity of distributing such literature, but in the event of

his failure to do so within a specified time the board of health should step in and furnish such literature and insist upon the advice given being carried out so as to secure the best results. The physician must himself be educated to an understanding that it is not simply a question of his client and himself, but that it is a matter of common interest and for the common good.

In closing, I would ask you all to remember that we are warriors in a great army, engaged in a fight against disease and for the conservation of human life. Alexander, Caesar, Napoleon and other great military leaders sacrificed millions of lives in their struggles for lust and power—and they have been called great! But the luster once attending such names is fading before the greater glory of Jenner, Pasteur, Lister, Koch and a host of others, who also are conquerors, not sacrificing human lives, but fighting and overcoming disease to save untold millions. The bravery of the Light Brigade has been immortalized in history and in song; and yet were the members of the Four Hundred any braver than Carroll, Reed and Lazear, who offered their lives that the secret of yellow fever might be revealed and that dread scourge overcome? Should not their names be on the roll of honor and their statues be given niches in the Hall of Fame! All of these sublime efforts were not made for public applause or for material gain, but for the good of humanity. "For greater love hath no man than this, that a man lay down his life for his friends."

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As a means of checking tuberculosis in the principal cities of Brazil, the sanitary authorities of that country have instituted a campaign involving the expenditure of \$1,250,000. The project includes the compulsory reporting of every case of tuberculosis, the establishment of hospitals, agricultural colonies, and sanatoriums.

According to a report of the United States census, it is stated that the mortality of the Indians from tuberculosis is undoubtedly far higher than that of either the whites or the negroes, although it is believed by careful investigators that the disease was entirely absent before the advent of the whites in America.

## THE NATURE AND TREATMENT OF GUNSHOT WOUNDS.\*

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The invitation of the Monroe County Medical Society, to which I am now responding, provided that my subject should be of interest to general practitioners. Gunshot wounds is admittedly an uncommon topic for a civilian medical society, but I hope both to show your concern and to arouse your interest in it.

H. S., age 10, while visiting relatives in a neighboring county, was shot with a pistol, July 2, 1909, a blank cartridge making a jagged wound on the inner side of the first phalanx of the left index finger. A doctor was said to have dressed the wound three times. Afterwards the patient returned to Detroit apparently all right. He played with his companions and went to the public bath. On the night of July 7th, five days after the receipt of the injury, he was restless and slept little. The next day he was seen by two physicians who advised his removal to a hospital. He was admitted to St. Mary's Hospital, July 8, 1909, at 3 p. m. His jaws were stiff, his back rigid, and he was generally uneasy. Fifteen hundred units of antitetanic serum were administered subcutaneously at once, and twenty grains of chloral were given by mouth. An hour later, when I saw him first, he was sleeping, but awoke at a touch. Chloroform was administered and the wound opened, cleaned, swabbed thoroughly with 95% carbolic acid and absolute alcohol, and dressed with gauze saturated with hydrogen peroxide. The dose of serum was repeated twice within the next twenty hours and chloral, morphine, hyoscyamus and chloroform were given abundantly, but the spasms of the muscles, especially of the neck and back, continued until 4:30 p. m., July 9th, when he died, about forty hours after the onset of the symptoms and on the eighth day of the gunshot wound.

Case 2. L. F., age 32, while standing in the

doorway of a farm house, was shot in the left inguinal region, July 5, 1909, at 6:30 a. m., at about twelve feet distance, by a fellow laborer who "didn't know it was loaded." A physician dressed his wounds, picking out shot and debris, after which he was carted to the hospital. Examination showed a large area of skin about the wound to be honeycombed with bird shot; the abdominal wall was perforated by a circular wound half an inch in diameter, and the load consisting of a gun wad and numerous shot, together with shreds of clothing, were found lying upon the omentum and removed. A perforation in the intestine was closed. The case was septic and peritonitis developed. In spite of much drainage and the institution of proctoclysis in the Fowler position, the patient succumbed on the sixth day.

Case 3. W. M., a boy of 13, shot himself in the center of his right palm, July 5, 1909, while playing with a pistol and blank cartridges. He stated that he went to one doctor first who refused to have anything to do with him as he had no time. He went then to a druggist who gave him peroxide with directions as to its use. As he was feeling ill on July 9th, his father brought him that night to St. Mary's Hospital. Under anesthesia the wound was opened, cleared of powder, irrigated with peroxide and bathed with antitetanic serum. Fifteen hundred units of antitetanic serum were also administered hypodermically and repeated twenty hours later. The wound has been treated with carbolic acid and alcohol daily and at this date there are no untoward symptoms.

The three cases just recited and the more than five thousand others that occurred in this country last week in the course of our annual Chinese celebration, constitute part proof of your concern as general practitioners in gunshot wounds.

According to the *Journal of the Ameri-*

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\*Read before the Monroe County Medical Society, July, 1909.

*can Medical Association* there were 415 cases of tetanus in the United States in 1903, 105 in 1904, 104 in 1905, 89 in 1906, 73 in 1907, and 76 in 1908. Fifty-five died of tetanus last year. One hundred and eight other deaths were due to firearms and other fireworks. Firearms caused 481 accidents. One hundred and ninety-four were struck by stray bullets from the reckless shooting of firearms by others. Altogether 5,623 Fourth of July accidents were reported last year, being 1,210 more than the year previous and 157 more than in 1906.

The gunshot wounds just referred to may be said to have been in season. They occur out of season also and are by no means rare. Exact statistics are wanting, but the number of such cases is increasing each year, especially among European immigrants and the first generation of their descendents.

Military surgery has been the forerunner and to an extent the teacher of civilian surgery in the matter of gunshot wounds, but there are distinctions and differences between them, both in pathology and treatment, which should not be overlooked.

In the first place it is well known that military arms have undergone marked changes in the last forty years. The attempt to increase the range and effectiveness of firearms has resulted in a change in the character of gunshot wounds. The jacketed cartridge of small diameter and long dimension has been found to be less destructive and more humane than the old leaden bullet. The rifling of the modern cartridge makes it aseptic and, other things being equal, the damage produced in the body varies according to the distance of the projectile from the weapon.

To quote briefly from the late Doctor Nicholas Senn: "The effects of the small-calibre bullet correspond with three well-marked zones. The first zone, up to 400 metres, is the explosive range,

within which fearful wounds are inflicted. \* \* \* Wounds of soft parts correspond about with the size of the bullet; \* \* \* there is not much difference in size between the wound of entrance and exit. \* \* \* The compact portions of the large, long bones always show extensive splintering, but in flat bones drill perforations, with or without fissuring, are the rule. \* \* \* The second zone covers the distance from 400 to 800 metres. Within this range, the explosive effects are only seen in gunshot injuries of the skull; all other wounds are noted for the absence of extensive destruction of tissue, including the bones. The third zone extends from 800 to 1200 metres. Injuries inflicted at this distance are comparatively slight. The bullet cuts a clean track. The wounds of entrance and exit diminish in size with the increase of distance, the former being a small circular defect, five millimeters in diameter, and the latter often a small slit, six to seven millimeters in length, so small that it may be difficult to find it. The bone injuries are drill holes or furrows without splintering. Beyond this zone, 1,200 to 2,000 meters \* \* \* destruction of bone becomes more extensive. Even at this distance bullets seldom lodge in the body."

From a variety of experiments, Kocher concluded that the destructive effect of a bullet depends principally upon the hydrostatic pressure of the incompressible fluids contained in all the tissues of the body. Hydrostatic pressure is intensified by the degree of velocity of the bullet, its calibre, and the amount of fluid contained in the object fired upon. Bullets with low velocity cause no hydrostatic pressure. In wounds made by bullets of equal velocity, the size of the bullet determines the extent of the destruction, that is, the larger the bullet the more severe the wound.

The foregoing observations by recognized authorities place military and naval



arms in a different class from the fire-arms met with in civil life. As battle-field wounds differ from each other, so it might be expected that they would differ also from gunshot wounds in civil life. Having depicted the former sufficiently for the purpose, let us turn our attention now to the latter.

Wounds received in a blasting accident, like those from giant firecrackers and cannon, are characterized by their lacerated condition. Being usually open, they seldom terminate in tetanus unless infected through dust and closed. The pistol and revolver are responsible for most gunshot wounds in civil practice. These weapons being alike, with the exception that the latter has a revolving cylinder or revolving barrels, use the same projectile, have the same range and may therefore be considered together.

The ammunition most commonly met with in civil practice consists of two forms of cartridge, the blank cartridge loaded with a paper bullet and the ball cartridge. The revolver cartridge is similar to that for the rifle, only shorter, varying in diameter from 0.22" to 0.45", in weight from twenty-five grains to half an ounce, and conical or truncate in form. Ball cartridges are usually made of compressed lead, but sometimes hardened by the addition of tin or antimony. Unlike the rifle cartridge used in military operations by most nations at the present time, revolver cartridges are not mantled.

In marked contrast to the modern military rifle, which has a muzzle velocity of nearly 2,500 feet per second and a killing range of two miles, pistols and revolvers impart a comparatively low velocity to a projectile on a curved trajectory and therefore have a much more limited range. An investigation of most civil gunshot wounds bears witness that the missile was discharged either by the victim himself or within twenty yards of him. Because of the use of small hand

weapons and of the consequent close range at which gunshot wounds are inflicted in civil life such injuries are usually direct. If a discharged bullet strikes an intervening object, its energy will be diminished, its shape altered, and the harm done correspondingly affected.

As a general rule it may be said that the majority of gunshot wounds are not septic. That statement will apply, however, more strictly to such injuries in military practice than in civil practice. In the first place ball cartridges in their original packages are free from septic germs, because of the care taken in their manufacture. As has been also already pointed out the rifling of the jacketed cartridge puts a clean surface upon it, and, unless it be a ricocheted bullet, it is not liable to carry particles of clothing or other infectious material with it into the body. In civil practice, however, conditions are different.

The wads of blank cartridges are made of rags and other soiled matter and are believed to contain in many instances virulent tetanus bacilli and the ordinary germs of suppuration. Furthermore, they are liable to become infected through careless handling and the germs of anthrax are not, and the germs of suppuration may not be destroyed by the act of firing. The muzzles of revolvers and pistols are so short that the bullet probably makes no more than half a revolution before it leaves them. Again the kind of clothing worn in civil life, in comparison with the khaki jacket, predisposes, especially with the truncated cartridges, such as are used by the Detroit police force, to particles being torn out and carried into the wound.

Because of their low velocity, revolver bullets produce slight explosive effects and little splintering of bone. They do contuse and lacerate all soft tissues in proportion to their size, shape and velocity, but, not being jacketed, easily become deformed and not infrequently flat-

ten out on the long compact bones. If they strike spongy bones, as the vertebrae or the long ends of long bones, they may penetrate and lodge therein. They are more liable to perforate thin flat bones, but even in them may not cause much fissuring.

If the weapon be fired at close range on an exposed part of the body, a powder burn or "brand," as it has been called, is always found on the hammer side of the weapon which inflicted the wound. That effect is nullified, however, by the use of smokeless powder.

The effects of revolver bullets upon the different structures vary. A spent bullet may simply contuse the skin. If it strike the body vertically it may make a circular wound of entrance corresponding to the size of the bullet. If bone be subcutaneous the wound may be slightly larger than if soft tissues intervene. If the missile strike at an angle, or be deformed, it will make a "keyhole" or other irregularly shaped wound. If it be irregularly shaped the tissues will be correspondingly lacerated. Vessels may be injured by the projectile, but not as frequently as in military practice. Nerves are more often divided by the large lead bullet than by the small jacketed cartridge. In all cases there is extravasation of blood at the bottom of the wound.

Of all gunshot wounds of the body those of the brain, especially at the base, the upper portions of the spinal cord, the heart and the great blood vessels are the most important, as they are liable to cause immediate death. Wounds of the hollow viscera, lungs, kidneys and large joints are grave on account of the danger of sepsis. Penetration of liver and spleen may result in dangerous hemorrhage, whereas those of the skin, fasciae, muscles, tendons and other soft tissues are not to be feared, unless they become infected with tetanus.

Horsley has called attention to the fact that respiration may be totally in-

hibited as the immediate effect of gunshot wounds involving the brain, even though blood pressure be undisturbed. In other cases both respiration and circulation may be interfered with, causing the victim to drop to the ground without dying. That phenomenon I observed as a boy when a companion was struck forcibly on the chest near the neck with a snowball, causing him to fall momentarily to the ground.

It is in their treatment that the disparity between gunshot wounds in military and civil life is or should be most marked. On account of the aseptic character of the missile and consequently of the battlefield wound and the inappropriate facilities at hand, conservatism or the expectant plan of treatment has obtained. Even in cases of abdominal injuries in which operative interference seemed to have been warranted the results have been discouraging. In civil practice, however, not only are the safe removal of the bullet and the toilet of the wound reasonable, but also the results have been argumentative toward the adoption of the principles of surgery as in other injuries.

Temporarily all gunshot wounds should be protected at the earliest possible moment by first aid dressings. Alarming hemorrhage, shock, and dyspnea should be given immediate attention, but the removal of the bullet, probing or any further treatment of the wound should be left until adequate preparations shall have been made. Gunshot wounds should never be closed with either adhesive plaster or sutures. They should invariably be left open and drained.

Wounds made by blank cartridges should always be cleared of all foreign matter, treated with antiseptics, kept open and drained and antitetanic serum injected as a precautionary measure. Fifteen hundred units constitute a safe immunizing dose.

Tetanus is essentially a disease of the

spinal cord and medulla. The toxin does not reach those structures by way of the blood and lymphatics, but by nerves. Pochhammer's studies go to show that the tetanus toxin is deposited in and bound by the myelin in the medullary sheath, and may be retained in the nerve tracts for years. Only when the toxin has finally worked its way to the mixed peripheral nerves and nerve trunks do symptoms develop. For that reason the shorter, small mixed nerve branches are more readily affected by the toxin than the larger trunks, a fact which explains the localization of the symptoms in muscles of that kind, such as the muscles in the throat, neck and back, innervated by short, small mixed nerves. It has been found that antitetanic serum is taken up slowly after injection, that only after twenty-four to forty hours does the greater portion enter the circulation, and that most of it is eliminated unchanged in the secretions and excretions. For these reasons it must be administered early to be of any use. Pochhammer's researches indicate that antitoxins or antibodies are not absolutely specific, but merely induce general processes of regeneration, and that serotherapy in established tetanus is generally useless or actually harmful, taxing the organism, even if it does not have a direct toxic action.

Another method of treatment advanced by Bacelli consists in the subcutaneous injection of a one per cent solution of carbolic acid until eighty grains are given to an adult in twenty-four hours. Owing to its rapid elimination, the injections should be at short intervals.

If tetanus develop, chloral, morphine, the bromides and other nerve sedatives should be given in sufficient doses to control the tetanic spasms.

In the case of bullet wounds it has been the practice with many surgeons in the past to probe the wound and then, if unsuccessful, await developments. In

my opinion such treatment is not only not modern surgery, but it is even harmful. With the aid of the radiograph or the fluoroscope the location of bullets can usually be determined with sufficient accuracy to warrant a moderately dextrous surgeon to attempt their removal. In my own experience the location of the bullet in its bed has been the most difficult part of the technique. Once felt its removal is a simple matter. No elaborate instruments have been required. The bullet probe even is superfluous. The best probe in gunshot wounds is the index finger of the surgeon. After widening the wound of entrance under general anesthesia the finger can, in recent wounds, be passed along the track of the bullet more easily than one might suppose. With the finger tip in proximity to the offending missile it can easily be uncovered and a pair of long slender forceps can be passed alongside, made to grasp and dislodge it.

Gunshot wounds of the skull demand closer and more prompt attention than those of the extremities. The wound of entrance should be thoroughly exposed, enlarged if necessary, loose spiculae of bone removed, depressed fragments elevated and drainage provided to carry away the wound secretions. If the skull be perforated, thorough drainage should be secured. If the bullet be lodged within the skull its localization and the resulting symptoms will govern the advisability of surgical intervention. Statistics of wounds of the spine collected and reported by Prewitt and Schmidt give a well-marked percentage in favor of the operated cases.

Under present conditions gunshot injuries of the chest are best treated conservatively. Absolute protection of such wounds without probing, immobilization of the chest and active watchfulness for infection and hemorrhage in pleura or lung will best meet all needs.

It is perhaps in gunshot wounds of



the abdomen that civilian surgery has triumphed most over military surgery. It has been found that about ninety per cent of gunshot wounds of the abdomen perforate some organ or organs, half of which are of the intestinal tract. Wounds of the lower abdomen are more to be feared than those of the upper abdomen. In the penetrating wounds of the abdomen the danger of internal hemorrhage and of perforation of the stomach or intestine and consequent leakage demands immediate operation. Of 700 cases collected by Siegel the mortality varied from fifteen per cent in those operated upon within the first four hours, to eighty-seven per cent when operation

was delayed beyond twelve hours after injury. Having disinfected the wound, an incision through the left rectus close to the median line will give the best exposure to the stomach and adjacent organs. Intraabdominal hemorrhage should first be controlled. Wounds of the liver, spleen, and pancreas will not infrequently be found. Multiple injuries of the viscera are the rule. Perforations of the stomach, colon, duodenum and adjacent coils of the intestine should be carefully sought and repaired according to the principles of modern surgery. Drainage should be provided through the anterior wound and occasionally through the left loin or above the twelfth rib.

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**The High Enema.**—Horace W. Soper considers the question of how far into the colon a soft rubber tube can be introduced. He believes that it is only in those rare cases of abnormal development of the sigmoid that it is possible to introduce a soft rubber tube higher than six or seven inches in the rectum without the tube bending or coiling on itself. With the aid of the sigmoidoscope only the middle of the sigmoid can be reached. The practice of allowing liquids to flow through the tube simultaneously with its introduction serves to smooth the kinks and adds to the illusion that the tube is going higher. The short tube, six inches in length, is therefore best for all sorts of enemata, e. g. (a) when water, etc., is introduced for the purpose of causing fecal evacuations, using the fountain syringe or funnel and long tube in the usual way. It is possible,

as he has frequently demonstrated, thoroughly to cleanse the entire colon by using a large ( $\frac{1}{2}$  inch) short tube. This is connected by rubber tubing to a large funnel elevated from 3 to 4 feet; the solution is poured in until the patient experiences a feeling of distention or desire to evacuate; then the funnel is lowered until the outflow has ceased, and this maneuver is repeated in exactly the same manner as in gastric lavage. The short tube is also best (b) when retention of liquid is desired, as in administering saline solution, oil, nutrient material, etc. The attempt to pass the tube higher into the bowels is not only unnecessary but, because of the coiling that inevitably occurs, such a manipulation tends to produce irritability of the bowel and this, of course, will very probably cause expulsion of the fluid.—*J. A. M. A.*, August 7, 1909.

## THE FRONTAL SINUS.\*

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Inside the cranial vault a sinus is a sulcus or groove for the reception of a vein; outside, it is a cavity normally filled with air.

The Frontal Sinuses are two in number and are found on either side of the root of the nose. They are irregularly triangular in shape, the apex being directed outward and forward, the base being the ethmoid bone, and are formed by the separation of the plates of the frontal bone. The outer plates lie beneath the inner part of the brows and give rise to the nasal eminences and the superciliary ridges, and extend into the inner part of the orbit. The inner is above and forms the cerebral floor, outside the cribriform plate of the ethmoid. The walls of the ethmoid cells and the septum between the sinuses complete their boundaries.

Their size is variable—from mere rudiments to the size of an English walnut, and they are frequently unequal, the left usually being the larger. They are larger in the male than in the female and increase in size from rudimentary proportions in childhood to full development in advanced age. Deviations from the normal are seen in bony septa or the absence of the partition wall which normally divides the sinuses.

Each is connected with the nares by the infundibulum whose external orifice is in the upper, inner angle of the middle meatus. They are lined by a mucous membrane, continuous with that of the nose, but peculiar in its intimate blending with the periosteum.

Physiologically, the sinuses would

seem to be merely for mechanical purposes and protective of other structures. The supraorbital prominences give defensive protection to the eyes from blows, and the double plate with space between is more resistant than a single plate of double strength, or two superimposed plates. Violence that would break the outer plate but be successfully resisted by the inner might not break through a heavier single plate, but might do it sufficient injury to menace the vital structures contiguous, and would permit concussion or contusion. This suggests that the size of the sinus is in a measure an index to the combativeness of its possessor. The male being the more pugnacious, has a more developed sinus than the female, and the natural defensive position being with the left side of the head in front, would account for the greater size of the left sinus. Animals which fight with their heads have relatively larger sinuses than those which do not. Pathological conditions may be considered as coming from three sources—from without inward through the outer tables; in situ; or from the nasal cavity.

Direct violence may produce fractures, with or without depression, accompanying which a body foreign to the cavity may find entrance and lodgment. If no deformity result from simple fracture of the external table, no special treatment is necessary, but in depressed fractures the bone should be elevated, and loose fragments removed, care being taken that no obstruction to the nasal outlet remains. The orbital portion may be ex-

pressed and if it cannot be restored from within the conjunctiva may be slit and an instrument passed back and reposition of fragments thus accomplished.

Fracture of the inner table is not likely from *contre coup*, owing to the egress of contained air through the infundibulum, but if violence to the outer table be sufficient to cause forcible entrance of a foreign body into the sinus, care must be exercised not to overlook a depression of the inner table.

Solution of the continuity of the inner table is liable to be more disastrous here than in places more favorable to protection from infection. The very thin covering of the bone and direct connection with the nasal cavity menace the meninges. The greatest safety would be given by careful cleansing and packing, until granulation should have sealed the opening into the cranial cavity.

How to restore a depressed fracture in this situation is not discussed by any writer so far as I know, so I venture the suggestion that in difficult cases an opening above the plate admitting an instrument which could be pushed directly backward over the depressed bone would permit safe reposition, without so much danger as there would be in trying to pick sharp fragments out from within the sinus.

The sinus is not a favorite site for neoplasms, consequently the growths most frequently found here are encroachments from neighboring locations. Carcinomata, syphilitic growths, cysts, polypi, osteomata and other tumors are encountered but rarely. Their symptoms are pain, long and continuous, referable to the superciliary ridge and root of the nose; sometimes discharge from the nose; tenderness of the overlying parts is often early manifest. Continuous growth causes thinning of the bony walls, with pressure on the surrounding parts, the brain, eyes, nose and forehead. Great deformity sometimes re-

sults. The application of general surgical principles is called for in the removal of these growths.

Of the diseases coming by way of the nasal passages are from infections and foreign bodies. Here, as elsewhere, free drainage is necessary for the maintenance of health. The great frequency of malformations and malpositions of the bones of the nose furnishes a predisposing cause so marked that the wonder is diseased sinuses occur so seldom.

So long as the infundibulum remains freely patulous, inflamed surfaces drain and heal, but swelling of the mucous lining or impingement from diseased neighboring parts, or foreign bodies in the nares, tend to obstruct the egress of disease products (or physiological secretion for that matter) and symptomatic disease begins.

Influenza, scarlet fever, erysipelas and pyogenic germs are amongst the most frequent intruders, but any infectious disease of the nose or throat may furnish the germs for frontal sinus implantation.

Cleansing antiseptic sprays or irrigation of the parts, especially when operated from the pharynx, serve to relieve the nasal disease and are the best means of combating incipient or mild infections of the sinuses, by providing better drainage, even more than removing infection. Suprarenal preparations or cocaine so contract the tissues as sometimes to open the way into a sinus, otherwise impatulous. Inhalations of hot vapor and hot fomentations externally give comfort and promote cure. Baths are of great service.

Irrigation of the sinus itself is sometimes possible by means of a catheter, but my limited experience with it has not been favorable. The cases requiring it are usually those presenting deformities of the septum or turbinated bodies or abnormal ethmoidal cells, which render catheterization difficult and irritation from the effort more harmful than the benefits derived.



Nasal polypi or other foreign body in the nose demands removal. Adenoids should be cleared away and large or infected tonsils remedied. Otherwise chronic conditions will result and empyema, granulation or necrosis have to be dealt with.

If these have already occurred a more serious problem confronts us.

We shall find pus oozing from the middle meatus at its upper, inner angle, and dripping on the posterior pharyngeal wall, and if a probe be passed up through the infundibulum it will be followed by pus on its withdrawal. The patient suffers great pain in the brow and redness, swelling, and tenderness are present until there is a discharge of pus. Sometimes this comes through the nose, forcing its way through the infundibulum or into the ethmoidal cells, relief following the evacuation. It may, however, burrow into the orbit through the orbital plates of the frontal and ethmoid bones, or into the meninges, causing a cerebral abscess. I saw one case of the latter condition, in which, despite late anterior evacuation, death resulted from meningitis.

The length of time a purulent infection of the frontal sinus may continue if it find occasional temporary relief by evacuation, is indefinite. I operated upon one case which had given severe trouble for 14 years.

It is not easy to differentiate neoplasms, retention cysts or empyema in this situation from each other or from similar conditions in the other adjacent sinuses. A probe passed into the infundibulum or ostium maxillare will be followed, upon withdrawal, by pus, in case of empyema of either cavity, but the location of pain and other clinical facts will locate the seat and character of the trouble most frequently.

Having determined that empyema exists, anything less than effective drainage is inadequate. The frontal bone may

be trephined or chiseled through, just outside the root of the nose, the cavity cleared out and drainage established, or entry may be made through the ethmoid as nearly as may be following the infundibulum.

If we content ourselves with the opening through the frontal, we shall very frequently be disappointed in achieving a satisfactory result. I feel sure it is an imperative duty to make free opening downward into the nose and insert an efficient canula, otherwise the imperfect drainage will result in recurrence and reopening of the frontal wound. Of course a free opening of the frontal bone can be maintained until granulations fill the sinus, thus obliterating it, but this is very tedious and troublesome. A silver or rubber canula should be maintained till a healthy condition exists about it, when a free opening will have been established.

Opening from below is not always easy. Deflected septum and enlarged or malformed turbinated bodies frequently offer difficulties. It is well to remove any part that obscures the view and then push a drill through the ethmoid cells, following as closely as may be the course of the infundibulum upward and outward toward the inner part of the superciliary ridge. Mechanical drainage should be maintained until swelling has subsided.

In India and some other countries quite frequently insects secure lodgment for their ova in this sinus and cause great annoyance. I have never heard of such occurrence in this country, but one of my earliest recollections is of efforts to get rid of grubs from the heads of sheep on my father's farm, by striking the animal with a club over the frontal sinus.

## A FEW FACTS ON BLOOD PRESSURE.

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Kalamazoo.

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Hypertension may be divided into two classes,—functional and essential. Functional elements of blood-pressure vary with changing blood distribution, especially with the demands for blood on the part of the brain, which is more dependent on general blood-pressure than the other organs. The essential blood-pressure represents that pressure required to overcome the resistance of the arteries due to this necessary vasomotor tone. In states of continual high blood-pressure due to the pathological effect of disease, the essential element must rise also. This is a very important practical consideration, for a fall too near the essential amount is dangerous to life *per se*. Where the average blood-pressure has been permanently above 200 M. M. the lower limit must be above 75 M. M. Hensen cites a case of chronic nephritis with an agonal pressure of 180 M. M. Likewise a fall of 30 M. M. in a patient with a constant blood-pressure of 150 M. M. will meet with much less serious results than a like fall in a blood-pressure of 225 M.M. A continued fall in pressure is far more significant of danger than any numerical value, as Cook and Briggs insist.

Functional hypertension is further divided into physiological, pharmacological, toxic and cerebral anemia, of which the latter is the most important. In this condition we have the highest records of blood-pressure attained in man, and if one would intelligently utilize the indications of blood-pressure in diagnosis and treatment, he must understand underlying causes. The monographs of Kocher, Hill, and Cushing

comprise a most important contribution, as well as a perfect elucidation of the subject. Acute cerebral anemia is known by loss of consciousness, respiratory spasm, slow heart, rise of blood-pressure with cessation of respiration, fall of blood-pressure, accelerated heart and death. This picture indicates that the bulbar centers are first excited, then paralyzed. If a state of shock supervenes in any animal or the anemia be slow of onset, the excitatory symptoms fail to appear. During such events Traube-Hering blood-pressure waves and Cheyne-Stokes respiration appear.

Intra- or extra-dural hemorrhage, or cerebral compression from any cause produces a like result. This no doubt seems peculiar. The cranio-vertebral cavity being a closed cavity, the brain substance incompressible, the blood content of brain constant, except for a slight absorption of cerebro-spinal fluid at high pressure, there will be little room for any foreign body except that made at the expense of the blood in the neighboring arteries and veins. Compression therefore produces local anemia from cessation of blood flow, to which the symptoms are due, and not the compression. The veins are narrowed at first and capillary pressure raised. Kocher calls this "the stage of compensation." There are few or no symptoms at the most. Venous stasis returns from slight increase of intracranial pressure, much diminished capillary flow, and brain tension soon equals the arterial—Kocher's "initial stage of manifest cerebral compression." Numerous subjective symp-

toms of general cortical or cerebellar anemia appear: headache, vertigo, choked disc. Should local compression be over an extensive area or situated in the posterior fossa; or if general cerebro-spinal compression result, the circulation in the medulla will be interfered with, and bulbar symptoms, consisting of a slowing of the pulse from stimulation of the vagus center and some rise in pressure from vasomotor stimulation, make their appearance.

Any further increase in pressure will now empty the veins and capillaries and as it passes the level of arterial pressure will soon cut off the circulation. This third advanced stage of manifest cerebral compression is in reality an acute cerebral anemia and leads to absolute loss of function. Now the vasomotor centers in the medulla respond to the increase of pressure, step by step, to preserve life, through an automatic effort, so to speak. Three hundred to four hundred M.M. pressure results frequently from such an effort put forth by the vasomotor center. Each rise, however, is not maintained. It seems to over-compensate, because every rise is succeeded by a fall, or pendulum-like oscillations which are called Traube-Hering blood-pressure waves. Synchronously, the respiratory center shows a similar rhythmical variation in its activity. Deep breathing coincides with period of high blood-pressure and established circulation, apnea with its interruption,—clinically Cheyne-Stokes respiration. The vagus center likewise is stimulated and the pulse rate falls materially, as everyone has noticed in apoplexy. This, in part, antagonizes the good effect of vasomotor activity. Should intra-cranial pressure prevail too long, hence, blood-pressure ascend too high, the heart fails in its effort to maintain the circulation and the medullary centers become exhausted. The final paralytic stage supervenes, a running pulse, and hypotension

followed by death. This functional rise of blood-pressure during acute cerebral compression is absolutely essential to maintain life. A fall of 30 M.M. in such a case is of more dangerous import than a like fall in a case of 150 M.M. pressure. Therapeutically we are lost. Hypertension depressors would kill our patient quickly. Decompressive measures as advocated by Cushing, Kocher, Leonard Hill and Crile, are indispensable for the cure of the patient. This step uprise of blood-pressure so readily obtained with our present day manometers indicates these measures at once. The vasomotor centers must not become greatly injured or our surgical measures are futile. In concussion we frequently see a hypotension. Stimulation by saline transfusion would be indicated in lieu of surgical relief. From the general picture of our case, and time elapsed since injury, one can easily differentiate a hypotension from a simple concussion, and a hypotension from the paralytic stage of intradural compression. It seems to me that surgery should be our resort in case of apoplexy for a removal of an intracerebral clot with extreme hypertension, as in cases of extra-cranial injury with extreme hypotension.

Under essential hypertension we have one class of diseases that raises the essential hypertension or agonal pressure. Traube, Conheim, Israel, Muller, Bamberger, Adams and Senator have frequently advanced numerous theories and engaged in heated controversies as to the cause of hypertension and cardiac hypertrophy in renal diseases. To be brief the facts are these:

I. Hypertension results from irritation of the cardio-vascular system through toxic products circulating therein; and this hypertension seems to be higher in the interstitial variety than in any other.

II. In renal diseases the splanchnic system is generally involved along with the systemic system, thus the splanchnic



system cannot compensate to the same degree to modify the hypertension as if it were uninvolved.

III. The cardiac hypertrophy is due to primary stimulation during earlier stages of the disease, and later, to the circulating irritant. The hypertrophy may be concentric or eccentric, some adhering to the former and some to the latter view.

Blood-pressure may help us to elucidate some of the obscure cases that come to us in our everyday office work. Renal and cardio-vascular changes are insidious in their onset and a mild degree of hypertension frequently escapes our attention in rapid examination. Though we know by experience that interstitial nephritis produces a higher tension than other renal lesions we cannot make a positive differential diagnosis. In cases of contracted kidney the hypertension is important and most constant; coincidentally with this we have an enlarged heart which cannot easily be made out in obesity, in women with mammary hypertrophy, or in emphysema. Frequently albumin in urine, casts, etc., will not be looked for in the first examination and their presence would be doubtful in a majority of cases where blood-pressure will give us a cue at once. When edema occurs coincidentally with renal changes, the manometer fails to give us accurate records.

Edal has made a study of eight cases of cyclic albuminuria to find the relation that it bears to blood-pressure. Ordinarily cold baths and arising from bed would cause a rise of blood-pressure, whereas in these cases a fall occurred, albumin appearing simultaneously. In warm baths the primary rise in pressure was quickly succeeded by a fall, with albuminuria. No constant relation between the amount of albumin and rate or degree of fall of pressure has been demonstrated. Albumin excretion is known to be dependent upon the rate of blood flow through the kidney, the rela-

tion being an inverse one.

Erlanger and Hooker have made determinations to find a relation between blood-pressure, amount of urinary excretion and albumin, but found no constant relation. These observations, coupled with Edal's work, throw some light on the variation of albumin in urine, but not the cause of it. They throw some light on an interesting question and may prove of value in directing work in the future.

Manometric estimations prove useful in two classes of cases of weak heart, those with hypertension and those with hypotension. In the former group we include those with hypertrophied hearts which are insufficient to compensate for the increased peripheral resistance, whether due to renal disease, to arteriosclerosis, or to primary myocardial disease, complicated by Bright's disease or arterial disease. The second group includes the primary, uncomplicated forms of myocardial disease or the terminal stages of the former group. The cases of primary, uncomplicated cardiac insufficiency have high normal pressures with fairly normal pulse pressure. Those with hypotension are prone to have edema and marked evidence of right ventricular failure. It has been the custom to diagnose "fatty heart" in all cases of cardiac incompensation, showing cardiac enlargement, not due to valvular defects. Lately we call it chronic myocarditis. The pathological diagnosis of stained sections of such cases is difficult. Chronic myocarditis seems to describe the real condition. Clinically, however, it is wise to use the term with discretion and not use it to screen a multitude of pathological and clinical ghosts. Blood-pressure estimations in these two classes are indispensable, since a clinical demonstration of an enlarged heart in cases of mammary hypertrophy, emphysema, etc., is high impossible.

Blood-pressure in acute infectious dis-

eases is always increased during the height of the disease. Physiological experiments have been undertaken by Romberg and Pässler to study the cause of collapse that so frequently arises in such cases. Death during acute infectious diseases where due to extreme toxemia, is frequently ascribed to "heart failure," when that is not the true picture at all. In collapse in these diseases we find a small, empty and rapid pulse. There are no evidences of pulmonary edema; merely extreme prostration, cold skin, and ineffectual heart. The striking similarity of death from hemorrhage, and the absence of the usual sequences of cardiac asystole have made numerous clinicians interrogate the ordinary interpretation and ask themselves whether after all the patient's vaso-motor mechanism might not have failed. The paper of Romberg and Pässler shows clearly how clinical problems can be elucidated by experimental physiology. They injected 250 animals with the pneumococcus bacillus, pyocyaneus, or diphtheria bacillus and studied the collapse which occurred. They measured the mean carotid pressure at different stages of the disease and the effect upon it, (1) of abdominal massage, which increased the work of the heart by supplying more blood; (2), of compression of the aorta above the diaphragm, which makes work for the heart maximal; (3), of irritation of the nasal mucous membrane with a Faradic current, which causes extreme reflex vaso-constriction, and (4), of short asphyxia (30 seconds) which acts similarly, only on both medullary and spinal vaso-motor centers, while sensory stimulation affects only the center in the medulla. They reasoned that should there be no rise in pressure from sensory irritation or suffocation, while abdominal massage and ligature of the aorta still called forth a well-marked one, then the heart must be functionally capable and the vaso-motor mechanism at fault. To

determine whether central or peripheral vaso-motor mechanism was to blame, they injected barium chloride, which caused constriction of the arteries by purely local action upon them.

Their experiments showed that the blood-pressure and the response to all procedures remained perfectly normal throughout the early stages of the disease, being unaffected by fever. The greatest elevation of pressure was obtained on stimulating the mucous membrane of the nose. When the animals showed signs of impending collapse, the blood-pressure, although still normal, began to sink, while the heart beat more forcibly. Hand in hand with this went a great reduction in the rise of pressure from sensory irritation, a moderate decrease in asphyxial elevation but as high a pressure as before, after abdominal massage. In many cases the pressure did not fall until reflex rise had been almost abolished, evidently being maintained by increased cardiac energy in spite of the vascular dilatation. Finally in complete collapse, which developed very rapidly, the aortic pressure fell to the lowest level as after destruction of the spinal cord. No reflex rise could be obtained, but abdominal massage gave an immediate elevation. It was evident, therefore, that the circulatory disturbance at the height of the infection depended absolutely upon paralysis of the vessels and not upon any damage to the force of the heart. In diphtheria and pneumococcus infections there was some divergence. In pneumococcus infections the heart generally reacted to abdominal massage, whereas diphtheria toxin acts upon the cardiac muscle. Hasenfeld and Tennyvessey, as well as Romberg and Pässler, found that the diphtheria toxin acts upon the cardiac muscle to some degree. Von Stejskal has combated the theory of vaso-motor death in diphtheria, by attempting to show that the action of the toxin upon the cardiac muscles is essentially re-

sponsible for cardiac failure in diphtheria. Again Pässler and Rally have corroborated the vaso-motor theory of death in diphtheria by the application of Von Stejskal's own methods. They have shown that while the damage to the heart is actual, nevertheless it is not the cause of death at the acme of the infection. This, in diphtheria, as in pneumococcus septicemia, is due to vaso-motor paralysis which the heart is able, for a time, to counteract.

A continuous record of blood-pressure in typhoid fever will enable one to elucidate some of the doubt in complications like perforation and hemorrhage. In perforation there is an initial rise of blood-pressure succeeded by a fall. Hemorrhage shows a progressive fall in blood pressure without an initial rise. Janeway cites a case of typhoid fever where the blood-pressure had been followed. Suddenly there developed symptoms of perforation but no change in the blood-pressure. Nevertheless, surgical measures were introduced, but no perforation was found; in fact, no cause was found in the abdomen to explain the symptoms.

Thayer has examined the systolic blood-pressure and general vascular system of 165 persons who previously had had typhoid fever, and found an average higher pressure than a like number of normal people. Twenty-seven per cent of them had a pressure of 180 M. M., while 10 cases had a pressure above 200 M. M. Of 265 normal individuals who had never had typhoid fever, but one had a pressure of more than 180 M. M. Typhoid fever, pneumonia and diphtheria alter the cardio-vascular apparatus in the majority of instances. To detect this we need blood-pressure estimations, and, too, we can give a clearer prognosis. Furthermore, in pneumonia we can anticipate the crisis because this phenomenon is preceded by a falling blood-pressure. Accurate blood-pressure records

in pneumonia are difficult to obtain because of the peripheral cyanosis.

Blood-pressure records in certain surgical problems have been so ably presented by Crile, Cushing, Cook and Briggs that the manometer is finding acceptance as readily on the surgical as on the medical side. It certainly points out the absence of renal and vascular changes. Systolic blood-pressure estimations during anesthesia, hand in hand with taking the pulse, give at a moment's notice the condition of the patient. All peripheral operations are characterized by a vaso-constriction which means an increased pressure. In abdominal operations, the opening of the peritoneum causes a small rise. Sponging the intestines, washing out the abdomen, manipulation of the abdominal viscera, especially in the upper segment, all lower the pressure. Crile says "he can tell by a surgical blood-pressure record, whenever the peritoneum has been irritated," from increase of blood-pressure.

In surgical accidents, hemorrhage, collapse and shock, blood-pressure gives one exact data. Crile says, "that collapse is only a forerunner of shock." Of course, shock included the depression of other activities, but its danger is in the hypotension that results and this is due to loss of vaso-motor control and not to cardiac failure. Crile has clearly demonstrated that profound shock can be produced by over stimulation with strychnia as well as by reflex stimulation from a peripheral injury. A prophylactic to shock, then, in amputation of large trunks, is an injection of cocaine to block peripheral stimuli. Crile treats the superior laryngeal nerve with cocaine before surgical operations of any magnitude on the neck.

What is the therapeutic indication in shock? Some men have shown the uselessness of strychnia and digitalis, because the vaso-motor center will not respond to any stimulation centrally or



peripherally. Saline transfusions come nearer to solving the difficulty, but frequently prove futile. Adrenalin intravenously in dosage of 1:50,000 or 100,000 with addition of atropin seems to net the greater majority of successes. Cook and Briggs criticize the procedure

most severely and claim that digitalis and strychnia prove efficient. Crile has introduced a pneumatic suit to be used in shock, to maintain blood-pressure peripherally. An animal in profound shock has been kept alive for hours by the use of a pneumatic suit.

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### PROSTATECTOMY\*

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Petoskey.

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The relief of suffering mankind, when possible, is so mandatory upon the surgeon that being applied to by a man over fifty years of age, suffering from inability to completely pass his urine, necessitating frequent nocturnal micturition, which robs him of his normal composure and rest, the case should at once be entered into with a thought that ultimately an operation would be needed.

The patient should be asked to urinate in your presence and after he has completed the act, a catheter should be passed into the bladder to ascertain if any urine remains. Finding it there, the surgeon should at once ask himself the question as to what it is that renders it impossible for all the urine to be passed in the normal way.

A great deal can be gained by palpating the perineum, making a digital examination by way of the rectum, to ascertain the size of the prostate gland. Finding it unduly enlarged, with no

existing stricture, one can safely conclude that an enlarged prostate is the cause.

To further insure the correctness of his diagnosis, if accustomed to the cystoscope, it is an easy matter to put your patient up in position on an operating table and there anesthetize the urethra with a one per cent solution of cocaine, fill the bladder with sterile water and insert the instrument, as easily as you would a sound. Then it is that the sense of sight will make your diagnosis indisputable.

Enlarged and overlapping lobes are benefited in no other way than by removal. All such methods as are resorted to by some in the use of electricity are nothing less than charlatanism.

Some years ago it was thought that castration was an easy means of relief, but of late years I doubt if it has been practiced at all. Having determined upon an operation, it is right that the patient

\*Read before the Emmet County Medical Society.

should be forewarned that the operation sometimes results fatally, but that should he recover, which is very probable, he would for the rest of his life have comfort, amply great to repay him for the little uncertainties he is about to undergo. He should be further told that his sexual powers will in all likelihood be weakened, but rarely destroyed.

A few days in the hospital beforehand will be necessary to combat the cystitis which invariably results in a more or less degree. Bladder irrigations with sterile water, followed by the introduction of a five per cent solution of argyrol are indicated.

The operation is begun after all the necessary precautions have been taken to render the patient as clean as possible. A Young's forceps, which I present, is introduced into the bladder and opened wide. Once inserted it is allowed to remain ready to be drawn upon when the time arrives for such manipulation. Some operators make a transverse cut extending across the perineum, while others prefer the older and much more used method of cutting over the sound along the median raphé. Having gotten well inside the skin, dissection can be made slowly, avoiding the levator ani and transverse perinei and recto-urethral muscles.

The finger of an assistant moving in the rectum will greatly aid the operator

in keeping well located. Nearing the prostate, it is well then to draw down the prostate with the Young's retractor. This can be done to such an extent that the lateral lobes come readily into the wound and before one's vision. This little instrument I here show is a very handy thing to scratch the sheath; that being done, one can with the finger or a curet enucleate readily its contents. By this method one need not fear so much the hemorrhage which can be seen and controlled. This method, I believe, is preferable to the suprapubic operation, which, however, has its advocates and commendable advantages.

Many self-retaining appliances are on the market to be inserted for drainage, as it is well known amongst operators that not given drainage the patient may die in a few days from uremia. I see no reason, however, why these should long remain in situ, as after two weeks' drainage can be had through the urethra, thereby diminishing the danger of a chronic fistula, opening through the perineum.

I herewith submit for your notice a prostate gland removed after this fashion in the late summer; from which operation the patient made a splendid recovery. He writes me recently that he is enjoying the best of health and immunity from nocturnal annoyances.

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Consumption among Japanese laborers is increasing to such a degree that the figures are becoming a source of anxiety to Japanese merchants and officials. A large percentage of laborers who are sent back to Japan by the Japanese charity associations are consumptives. It is claimed by the Japanese newspapers commenting on this matter, that through the lack of hospital accommodations in the Japanese labor camps tuberculosis increases at an alarming rate. They suggest that a new system be employed in dealing with the sick in these camps, as the Japanese

are quite ignorant of even the most simple health safeguards.

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Nine deaths from tuberculosis were caused during the last year in the Department of Finance of New York City, due, it is claimed, largely to infection from the books and papers. After one of the bookkeepers in the department died recently at his work from a hemorrhage caused by consumption, the city health authorities closed the office and made a thorough fumigation of the books and premises.

## PUERPERAL ECLAMPSIA.\*

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Escanaba.

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The subject of puerperal eclampsia is one which has attracted attention from the earliest days of medicine. Notwithstanding this, it is ever new. With a mortality of from 20 to 35 per cent, occurring about once in every 200 or 300 cases, often with a sudden and unexpected onset, it well may be considered one of the most terrifying complications of labor. These facts also render it one of the most important of obstetrical subjects, and one worthy of careful study.

Eclampsia is an acute disorder of pregnancy and parturition, characterized by periodical convulsions. Modern belief teaches that it is the result of toxemia, an accumulation of toxic waste in the blood (urea and ammonium carbonate). It has been ascribed to sudden anemia of the brain, and by some observers to microbic infection. All that can be said at the present, is that eclampsia is the retention in the body of substances that should have been disposed of by the excretory organs, mainly the kidneys. Owing, however, to the inability of the adrenal system to convert the excess of waste incident upon the fetus, into benign and eliminable end-products, an accumulation in the system is the result. As these toxic wastes provoke inordinate vascular tension, an excess of blood is driven into all capillaries, including those of the spinal system and cortex, both the latter being thus rendered hyperexcitable, and a convulsion occurs. Thus it may be inferred that the convulsion is due to an increased cerebro-spinal tension, the headache, dizziness, irritability,

and sudden blindness, the clonic, tonic, tetanic spasms, the stupor and coma all point to increased intracranial pressure.

Among the pathological changes of the various organs may be stated:

(1) Kidneys—Parenchymatous degeneration, glomerulitis, and thrombi.

(2) Liver—Multiple hemorrhages and necrosis. Hemorrhagic and anemic necrosis of the liver with thrombi in the intra and inter lobular branches of the portal vein.

(3) Heart—Hypertrophy of the left ventricle, multiple hemorrhages and necrosis and parenchymatous degeneration.

(4) Lung—Hyperemia and edema of the lungs. Numerous thrombosed capillaries and veins and placental-cell emboli.

(5) Brain—Punctate hemorrhages in the areas of degeneration near the thrombosed vessels.

(6) Pancreas and adrenals—Hemorrhages and necrosis.

(7) The presence of bile pigment in the blood of eclampsia patients is not rare.

### Symptomatology.

Eclampsia should always be feared if there are signs of kidney disease or disturbances during pregnancy, for diseased kidneys are more liable to be insufficient than healthy ones. The prodromal symptoms of the attack are sharp pains in the head, epigastrium, or under the clavicle, failure of vision, great restlessness or stupor. A few moments after the prodromal symptoms, the attack comes on

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\*Read before the Delta County Medical Society.



with a stare; the pupils are at first contracted; the eyelids twitch; and the eyeballs roll; there are spasms of the muscles of the mouth and the neck; the head is pulled from side to side; the spasm then spreads to the trunk and upper extremities; the arms are strongly flexed, and the fingers are bent over the thumbs. The lower extremities are rarely affected, although the thighs may be flexed upon the abdomen. Consciousness is lost during the convulsion and for some time after, with each recurring fit the stupor deepens until at length there is unbroken coma. The temperature usually rises with each convulsion.

The convulsions of eclampsia must be distinguished from those of epilepsy, hysteria, brain disease, hemorrhage, or some source of irritation in the body.

### Prognosis.

In attempting to forecast the end of a case of actual eclampsia it is not wise to attach too much importance to the number of convulsions, as they not only vary with the quantity and nature of the poison, but also with the nervous equilibrium of the patient. The occurrence of convulsions after labor points to the presence of a grave state of affairs. The most favorable cases are doubtless those in which convulsions occur during labor and initiated by some definite external stimulus, such as obstetric manipulation. The quantity of albumen in the urine is a false guide, as in certain cases there is no albumen. The quantity of urea affords a much more reliable criterion. The gradual increasing severity of the convulsion after labor, is indicative of a fatal termination.

### Treatment.

In order to treat any morbid condition rationally it is necessary to have a more or less clear conception of the cause and the course of the morbid process, since otherwise treatment must become merely

symptomatic and be entirely palliative rather than curative.

Eclampsia is recognized today as one of the toxemias of pregnancy, the clinical course of the disease, and the widely disseminated pathological lesions which are found at autopsy, both tending to the same conclusion. The fact that it is limited to the pregnant state inevitably forces the conclusion that the particular toxin, or group of toxins, which give rise to the pathological condition, must in some way depend for their production on the development of the ovum and can not be due to external conditions or infection.

These toxins must arise from one of three sources: They may be due to a faulty maternal metabolism with accumulation of abnormal products in the circulation, to abnormal conditions at the placental site, as infection, or they may be produced during the development of the ovum and pass into the maternal economy through the placenta.

That faulty maternal metabolism is not the source of the toxemia would seem to be proved by the fact that eclampsia is limited to the pregnant state, and that the removal of the production of conception, or the death of the child in utero gives almost immediate relief from the severe symptoms in a large proportion of cases. Infection or other abnormalities at the placental site may be eliminated for the same reason, since if the placental site, i. e., the uterine wall, were the seat of the morbid process, the absorption of the toxins could hardly be shut off promptly enough to give the marked changes we see in at least one-half of the cases. We are, therefore, forced to the conclusion either that eclampsia is a toxemia arising from the absorption of products of fetal metabolism in excess of what the maternal channels of excretion can eliminate under normal conditions, producing an intoxication from an overwhelming dose of

toxins, or that an accumulation of toxins occurs owing to a lack of proper excretion of an amount which should ordinarily be cared for, producing an intoxication from accumulation. That both of these conditions may occur would seem to be proven by clinical observation, since we see on the one hand, the eclamptic attack developing suddenly out of a clear sky in a patient who has shown no previous signs of a toxemia, and in whom the urine drawn from the bladder after the onset of the attack is free from albumen, and contains a normal percentage of urea, proving that the intoxication was of sudden origin, while, on the other hand, the symptoms of toxemia may have been present for days, or even weeks in neglected cases, before the onset of convulsions.

The next point to be considered is what effect the toxins produce. In a general way, all cases of eclampsia may be divided into two groups, hepatic and renal, according to whether the liver or kidneys are most prominently involved. The distinction is rather a difference in degree than of kind, or else we are dealing with two distinct toxemias and are trying to classify them under one heading. The more severe cases, i. e., those which come to autopsy, show almost invariably the characteristic lesions of the liver. These lesions may have been associated with symptoms during life, such as jaundice and tenderness over the liver, or there may have been no symptoms pointing to the involvement of the liver. The less severe cases belong to the renal type, are seldom fatal if properly treated, and are characterized by a group of symptoms closely analogous to those of renal insufficiency. On close analysis, the two classes of cases differ only in the severity of the toxemia, and that the hepatic cases arise either when the system has received an overwhelming dose of toxins at the start, or when the early stages of the toxemia have been neglect-

ed. The effects of the toxins are those of a strong irritant poison, acting both on the nervous centers and on the tissues themselves. The irritation of the cerebral and spinal centers results in the convulsive attacks, and in stimulation of the vasomotor centers to the degree that the excretory organs practically suspend their functions for the time being, owing to lack of material to excrete. The irritation of the tissues is shown by the appearance of albumen, blood and casts in the diminished urine, and by the pathological lesions found at autopsy.

The great dangers to the patient are from failure of the circulation, due to either the direct violence suffered by the heart during the tremendous changes in the blood pressure, induced by the convulsive attacks, or to the exhaustion which may follow the extra amount of work thrown on the heart by the over action of the vasomotor system, and by the rupture of cerebral vessels during the convulsions.

Before considering the curative treatment of eclampsia, a brief consideration of the prophylactic treatment is in order, because there seems to be no question but that in the large majority, if not in all of the patients who show signs of a beginning toxemia, the development of eclampsia can be prevented by prompt and efficient treatment.

The prophylactic treatment may be briefly summarized as the prevention of an accumulation of toxins in the system, combined with the ordinary hygienic measures to maintain and improve the patient's health and general condition. The routine is simple and not burdensome to the patient, and its principal object is to maintain the free action of the excretory organs. The bowels should be kept thoroughly open, and a diet should be advised with this object in view, the free use of fruits being especially recommended. Failure of nature in this respect should be met by the daily use

of such of the mild cathartics as may be necessary, combined with the ingestion of large quantities of water, at least six glasses being taken between meals. The efficiency of this treatment may be distinctly increased if necessary, by the periodic administration of calomel, followed by a saline purge, thus cleansing the intestinal tract and preventing the accumulation of any large amount of waste products.

The urine should be carefully examined at frequent intervals, and any suspicious signs should be met at once by a thorough flushing of the system. The appearance of albumen calls for increased watchfulness, and the development of signs of renal irritation for rest in bed, a liquid diet, and an attempt at the thorough elimination of the offending toxins, by means of free catharsis, diaphoresis, and diuresis. The skin should be kept free and active by the use of daily baths. The appearance of convulsions, or the failure to effect a marked diminution of the toxemic symptoms calls for the immediate application of the most radical treatment, since it is in the late cases that the fatal results mostly occur. Treatment to be efficient must have four distinct objects in view: (1) Prevention of further absorption of toxins by removal of the cause; (2) Limitation of damage by the toxins already in the system; (3) Elimination of toxins; (4) Treatment of the patient as distinguished from the treatment of the disease.

(1) Prevention of further absorption.

Although not susceptible at present of direct proof, there seems little doubt but that the toxemia is due to an accumulation in the maternal system of waste products of the child, and the inference is clear that absorption can only be prevented by the immediate emptying of the uterus. Delay while attempting to suppress or limit the effects of the absorbed toxins simply serves to detract from or absolutely destroys any chance

that the patient may have. The observations of various writers lead to the conclusion that a large proportion of the so-called hepatic cases of eclampsia follow delay in emptying the uterus, while on the other hand, the marked amelioration of symptoms which follow *accouchment forcé* in the majority of cases certainly indicates that the earlier the operation, the better the patient's chances, although a considerable proportion of cases, slight or moderate in degree, will undoubtedly recover under medical treatment. The methods of operation to be employed in delivery must be adapted to the needs of the individual patient, but in general it may be said that the most rapid operation which is consistent with the safety of the patient is the most efficient. In a thin and relaxed cervix, mechanical dilatation and immediate delivery give satisfactory results. In cases with a rigid, cartilagenous cervix, colpohysterotomy is the operation of choice, providing conditions are favorable. Abdominal Cesarean section, and decapsulation of the kidneys are likewise to be employed in cases indicated for them. Unnecessary laceration and surgical shock are to be avoided, but a moderate amount of postpartum bleeding is to be encouraged, the loss of 16 to 30 ounces of blood being of distinct benefit to the patient, and acting as a venesection. The attempts to treat eclampsia without preventing the further absorption of toxins is irrational.

(2) Limitation of injury. The most important step in the treatment of eclampsia next to removing the source of toxemia, is to limit the damage the toxins already absorbed can do. It is generally conceded that next to the pathological changes in the internal organs arising from the direct action of the toxins on the tissue, the greatest danger to the patient lies in the effect of the convulsions on the heart and in favoring cerebral hemorrhage. The inference is clear that the convulsion must be con-



trolled until the toxins in the system have been eliminated. The most efficient method for controlling the convulsion consists in the administering of chloroform, followed by the injection of one-fourth of a grain of morphine, in combination with the hydrobromate of hyoscine, 1/100 of a grain. The morphine may be repeated twice or three times at hourly intervals, as may be necessary; the hyoscine once or twice, according to the condition of the heart. The effect of hyoscine, as a powerful spinal sedative, renders it exceedingly valuable in these cases, not only in controlling the convulsions, but in relaxing the vasomotor spasm and thus favoring excretions of the toxins (the depressant action of the hyoscine and morphine on the heart is overcome by the relaxation of the vasomotor system, and in this way diminishes the work of the heart.) After the acute stage is passed the sedative treatment should be continued by the free use of chloral, until the appearance of free excretion shows that the elimination of toxins is going on, and the recurrence of the convulsion is not likely.

(3) Elimination of the toxins. Thus far the treatment has been directed to stopping the increase of the toxins in the system, and to limiting the damage which they may do. The next point to be considered is the elimination of those toxins already absorbed. In the eclamptic patient excretion is almost at a standstill and the excretory organs seem to be paralyzed. This condition seems to have a double origin. The direct irritant effect of the toxins in the blood on the one hand, and a condition analogous to vaso-motor spasm induced by the irritation of the spinal center on the other, combine to check excretion, and both must be relieved to render treatment efficient. The irritant action of the toxins on the organs themselves is best minimized by the free use of normal salt solution, given either subcutaneously or

directly into a vein in appropriate cases, and to a point of tolerance. This serves to dilute the toxins in the blood, and combined with venesection affords an efficient means of reducing the irritating action of the toxins by dilution. In cases which present marked edema, or in which the heart action is very weak, the effect of the saline infusion must be watched carefully in order not to flood the system and increase the tendency to pulmonary edema. An initial dose of two quarts is generally borne in any case, and it should be repeated according to indications. Bleeding is often of great value, even in cases where the pulse is poor, the removal of 16 to 30 ounces of blood being often followed by distinct improvement, both in the symptoms and in the strength of the heart action. The dilution of the toxins in the blood, combined with the sedative action of the morphine and hyoscine on the spinal centers, is usually efficient in relaxing the vasomotor spasm and starting excretion. The hypodermic use of nitroglycerine is also to be advised, since it acts as a direct vasomotor dilator.

The intestinal tract is the most important channel for the excretion of toxins, although a considerable amount is eliminated in the urine; the action of the skin is comparatively insignificant. If the patient is unconscious and cannot swallow, or is under ether at the time of delivery, the introduction of one or two ounces of a saturated solution of magnesium sulphate into the stomach through a stomach tube, will usually result promptly in copious watery discharges. One or two drops of croton oil may also be given to accelerate the action of the bowels. This action, combined with the free injection of normal salt solution, results in washing the toxins from the blood and tissues into the intestines, and rapidly removing them from the circulation. The urinary excretion is best stimulated by the repeated use of the

saline infusions, followed later by the ingestion of large quantities of water or cream of tartar water, when the patient is able to swallow. The skin requires no special treatment, other than the hot pack; it is harmless, and soothing to the patient, especially when restless.

(4) The treatment of the patient. It must never be forgotten in the treatment of a condition of such severity as eclampsia and one which requires such radical treatment, that the danger exists of treating the disease at the expense of the patient, and that we may be called at any time to treat the patient for surgical shock or a failing heart action; that in many cases our efforts may have to be directed principally to attempt to revive the failing heart action; and that in certain cases radical treatment is unwise on account of the surety that it will kill the patient. In such cases the treatment must be directed to the patient's general condition and the disease allowed to care for itself. Free stimulation should be used whenever necessary.

### After Care.

For some days after an eclamptic attack the patient should be kept on a liquid diet, so as to throw as little strain as possible on the overworked excretory mechanism, and free excretion should be maintained. Sedatives and stimulants should be used whenever necessary. Nursing of the child, if alive, may be permissible if the condition is satisfactory after the third day.

In connection with this paper, I wish to report briefly a few cases of puerperal eclampsia, occurring in my practice within the last two years:

Case 1. Patient primipara, age 24, and pregnant at term. Called to see her February 2nd, at 6 a. m. There was in attendance an old woman. Labor began February 1st, about 10 p. m., and progressed normally until 3 a. m., February 2nd, when, as the old woman called it,

the patient developed a severe cramp. As I was talking to the patient, she developed another "cramp;" this I, however, recognized as an eclamptic convulsion. I immediately anesthetized her, the cervix was completely dilated, and labor terminated with the forceps, after which no further attacks developed. Recovery of both mother and child was complete. No further treatment was necessary. No urinary examination was made.

Case 2. Patient a primipara, age 20, and pregnant at term. This patient lived in the country. I was called to see her July 23rd, at 6 a. m., and arrived at 8 a. m. Delivery was spontaneous and no attendant was present. At 2 a. m. the patient was discovered lying on the floor in a convulsion, during which her baby was born.

The pulse was rapid and weak, for which nitroglycerine was administered subcutaneously. Croton oil per mouth, hot pack twice daily and solution of normal salt under the breasts. This patient did not recover consciousness until July 27th; during the interval chloral hydrate and sodium bromide were exhibited per rectum every three or four hours. Both mother and baby recovered. No urinary examination was made.

Case 3. Patient a primipara, aged 24, and pregnant at term. Called to see her September 26, 1907. Patient was walking about the room, had a slight headache and a severe pain in the epigastrium. She was put to bed, and one-fourth grain of morphine was administered subcutaneously. While injecting the sedative, she developed a severe convulsion, which was eclamptic. She was immediately anesthetized, the cervix was found dilated the size of about a quarter, which was completed with some difficulty, and a dead baby delivered with forceps. The convulsions did not cease; they were controlled, however, with chloroform and morphine. The patient was placed in a hot pack; croton oil by mouth; normal salt solution under breast; a venesection done, about one and a half pints of blood being extracted; 15 minims of fluid extract of veratrum viride every 2 hours subcutaneously. This patient succumbed to pulmonary edema at 11:30 a. m. without regaining consciousness. No urinary examination.

Case 4. Patient a primipara, age 19, and pregnant at term. Called to see her November 8th, 1907, at 1 a. m. Her labor was normal, duration 14 hours. She and her baby made a good recovery. November 20th, her husband tele-

phoned me about 11 p. m. that the patient awoke from her sleep, and found that there was a numbness of her left arm, and a little headache; she was quite restless. At 12:30 I was called to see the patient and as I entered the room, her eyes were wide open, and exhibited a rather blank stare. I spoke to her, but she seemed to be unconscious of her surroundings, and she immediately was seized with a convulsion. I put her under an anesthetic, and injected one-half grain of morphine. The pulse was tense and considerably accelerated. Two minims of croton oil were placed on her tongue, and patient put in a hot pack. One quart of normal salt solution was injected under each breast, and a venesection was done, about 16 or 20 ounces of blood being extracted. Patient died at 11 a. m., November 21st, without regaining consciousness. The urine of this patient was examined once a month for four months, and once a

week during the last month, and not a trace of albumen was present during these five months. The quantitative estimation of the urea was not determined.

Case 5. Patient a primipara, aged 23, pregnant at 7 months. Called to see her March 3rd, 1908. Labor was then in progress for four hours, and in three more she was delivered normally of a dead baby. Patient was feeling well, and made no complaints for an hour after her labor. She suddenly, and without warning, developed a convulsion. I put her under an anesthetic and injected one-quarter grain of morphine for the convulsion and placed two drops of croton oil on her tongue; normal salt solution was injected under the breasts, and hot pack given. Ten minims of veratrum viride subcutaneously were given every hour. She recovered consciousness in four hours and made a complete recovery.

**Benefits of Tuberculosis Sanatoria.**—In a recent investigation conducted by the National Association, 37 institutions located in 22 different States in all parts of the country were considered. According to information received from sanatorium superintendents, real estate dealers, and various disinterested parties, 67.5 per cent. of these tuberculosis sanatoria have had a favorable influence upon surrounding property, and have been a benefit to the community in which they were located.

In the case of 23, or 62.2 per cent. of the institutions, the presence of the sanatorium helped to increase the assessed valuation of surrounding property. In only one instance has property decreased in value, and there it was due to ignorance of the facts. In 22 out of the 37 cases, the presence of a sanatorium has even been helpful in the recent sale of land, and in only four places has any detrimental effect on sales been shown. In 51.3 per cent. of the cases, residents have been attracted to the community by the sanatorium, and in only three localities have residents been repelled.

Some examples show the increase in the value of surrounding property. In the vicinity of a sanatorium in Portland, Oregon, land has more than doubled in value in three years, and is in demand close to the sanatorium. At Aiken, S. C., property

in the neighborhood of the local sanatorium has increased 400 per cent. since the institution was built. At Hebron, Maine, surrounding property has increased 20 per cent. as a direct result of the presence of a tuberculosis sanatorium. A similar effect upon land values has taken place in other towns, such as Luzerne, Pa.; Liberty, N. Y.; Saranac Lake, N. Y.; Pittsford, Vt.; Mt. Vernon, Mo., and Silver City, N. M. At Asheville, N. C., vacant lots near one of the sanatoria in that city, sell at four times their price in 1900, and those farther from the institution but nearer the city are less valuable. Not a single instance was reported where the presence of a tuberculosis sanatorium, camp or dispensary in a large city has had a detrimental effect on the value of surrounding property.

The Courts of Massachusetts, North Carolina and Virginia have decided that a tuberculosis sanatorium is not a menace to the health of a community, and that it does not decrease the value of land in its immediate neighborhood.

The presence of a tuberculosis sanatorium has been a benefit also to the farmers in its vicinity from the fact that it affords a market for their produce, and gives more work to the unemployed. The merchants, too, have testified that a sanatorium is a stimulus and help to trade.



## The Journal of the Michigan State Medical Society

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to B. R. Schenck, M. D., Editor, 502 Washington Arcade, Detroit, Mich.

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OCTOBER

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### Editorial

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Every member of the component county societies, and particularly the county secretaries, should take notice of the fact that medical defense becomes an integral part of the State Society's work after January first. The dues for this work for next year are \$1.50 for each member, and must be sent by the County Secretary with the regular \$2.00 state dues. The full details of the plan are discussed in this issue.

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Medical defense against civil malpractice suits will become a feature of the state society work, after January 1st. The advantages of this new department to every member, have been so thoroughly discussed that it seems hardly necessary to reiterate them at this time. The plan adopted by the House of Delegates, by a vote of 27 to 2, and now incorporated in our by-laws, will be found among the proceedings of the Kalamazoo meeting, in this issue. The details are as follows:

A standing committee, to be known as the Medico-Legal Committee, is provided for. This committee consists of one member of each county society, elected by the county society, and an Executive Board of five, elected by the council of the State Society. The counties represented on the Executive Board do not elect a member of the general

committee. The members of the Executive Board are elected for a term of years, so that each new member, after this year, will be chosen for five years. This board will transact the business and the chairman, also elected by the council, will be the custodian of the funds.

The Executive Board will employ a firm of attorneys who will take charge of any suits or threatened suits, and will be the advisors of the local attorney in each case. This firm of attorneys will keep on file compilations of laws, decisions, etc., which information will be the property of the society. Thus a medico-legal bureau with much valuable information on hand, will be established.

This work will be maintained by an initial assessment of \$1.50 from each member for 1910, and each new member thereafter, and \$1.00 per year after the first year. Some county societies have funds from which the special assessment will be taken; others will levy the individual tax.

Any county may elect, by a majority vote of all its members, not to participate in this work. It should be noted that unless a society so votes it is assumed that the members will participate. In case the society votes not to participate, then no individual member can participate in these new privileges.

The defense of members will be undertaken, provided dues are paid before June 1st, regardless of when the cause of action arose, i. e., even if the alleged malpractice took place before this bureau was established. In this state a suit cannot be brought after two years. Suits already threatened or begun will be handled at cost. This provision is to prevent a man who is threatened, from joining the society merely to get free defense. If the cause for action takes place while a member is in arrears, defense will not be assumed, i. e., if a member wishes to keep protected, he

must keep up his dues.

Any member threatened must notify the local member of the committee, go over the case with him, recommend a local attorney and notify the chairman of the Executive Board. The general firm of attorneys will then act in connection with the local attorney, who must be approved by the former. Defense will be carried through all Michigan courts. In case a judgment is secured against a defendant, it must be paid by him.

Points especially to be noted are: Every member participates unless his county society votes not to do so, by a *majority vote of all members*. Back liability of two years is assumed, unless suit is threatened or brought before the defendant joins the society, or before January 1, 1910. In either of these cases defense is furnished at cost. Every member for 1910 pays \$1.50 for the first year. After the first year the rate is \$1.00 per year. If the fund should be exhausted in any one year, the society will advance, as a loan, sufficient funds to carry on the work. A member threatened or sued may recommend his own attorney. He cannot compromise or settle without the consent of the Executive Board and the general attorneys. Each county society, not represented on the Executive Board, elects one member of the committee at the first meeting after September 1st.

Information regarding any points not understood may be obtained by writing the chairman of the Executive Board, or the State Secretary.



**The Executive Board of the Medico-Legal Committee** comprises Dr. F. B. T. Tibbals, Detroit, Chairman; Dr. C. B. Stockwell, Port Huron; Dr. E. C. Taylor, Jackson; Dr. C. W. Hitchcock, Detroit, and Dr. Johann Flintermann, Detroit.

It will be observed that three members of this board have been chosen from Detroit. Originally it was provided in the plan that three members *must* be from Detroit. The object of this provision was not understood, and it was the point in the plan which received, in the postal card vote, the most criticism. Frequent meetings of this board are necessary; action must often be taken at once; consultations may be required on an hour's notice; hence, for the easy and smooth working of the plan it is absolutely essential that a quorum of the board reside in the same city. However, this is not provided for in the by-laws. Until the plan is well under way frequent meetings of the five members of the board will be necessary and the Council took this into consideration when choosing the other members of the board. The three Detroit members are those who have had the most experience in the absolutely successful Wayne County League. The chairman of the board is a pioneer in this line of work and has made it a study for seven years. He was one of the first in the country to agitate the movement, and has seen it grow until twelve states already have some form of defense work, while a number of smaller societies have taken it up, and at least three states have some plan under consideration.



**The forty-fourth annual meeting of the state society** is over. It was a good meeting, but not a record breaker in any way. The arrangements, as planned by the local committee of the Kalamazoo Academy, could hardly have been better, the local accommodations were ample, the weather was propitious and the entertainment and hospitality unsurpassed. The attendance was somewhat disappointing to the advocates of a fall meeting, for although the registration was the largest we have ever had out-

side of Detroit, it was not sufficiently larger to be in any way conclusive as to the wisdom of the change of time. The registration at Jackson in 1906, was 326, at Saginaw in 1907, 325, and at Petoskey and at Manistee about 175. At Kalamazoo, it was 329. We ought never to have less than 500, and there should have been, at the very least, 400 at Kalamazoo.

One feature of the Kalamazoo meeting will be long remembered, and that was the excellence of the program in the medical section. We have never had, so it seems to us, such a large number of well written, well delivered and well discussed papers as at this year's meeting.

The attendance at the sessions of the House of Delegates was better than usual, the business being dispatched rapidly and smoothly. Each year's experience confirms the wisdom of separating the routine business of the society from the general assembly, giving the latter ample time for more interesting things.

The next annual meeting will be held at Bay City, in September, 1910.

The registration at Kalamazoo was as follows:

ANTRIM.—Drs. Wm. A. Evans of Bellaire and R. E. L. Gibson, of Central Lake.

BARRY.—Drs. A. I. Laughlin, Woodbury; G. W. Lowry, Hastings; Donald McLeay, Prairieville; J. W. Rigterink, Freeport; Alice M. Roehrig, Hastings; Chas. Russell, Hastings; F. F. Shilling, Nashville.

BAY.—Dr. H. N. Bradley, Bay City.

BERRIEN.—Dr. E. J. Witt, St. Joseph.

BRANCH.—Drs. W. A. Griffith, Coldwater; Fred H. Harris, Kinderhook; Samuel Schultz, Coldwater.

CALHOUN.—Drs. A. W. Alvord, Battle Creek; G. M. Braden, Scott; J. C. Brown, Battle Creek; E. M. Chauncey, Albion; H. W. Dunlap, Battle Creek; S. R. Eaton, Battle Creek; J. M. Elliott, Battle Creek; James A. Elliott, Battle Creek; E. L. Eggleston, Battle Creek; W. L. Godfrey, Battle Creek; R. M.

Gubbins, Ceresco; Wilfrid Haughey, Battle Creek; W. H. Haughey, Battle Creek; G. C. Hafford, Albion; J. J. Holes, Battle Creek; Meta Howard, Albion; Louis S. Joy, Marshall; A. S. Kimball, Battle Creek; A. F. Kingsley, Battle Creek; A. E. MacGregor, Battle Creek; W. C. Marsh, Albion; W. F. Martin, Battle Creek; M. A. Mortensen, Battle Creek; J. L. Ramsdell, Albion; R. D. Sleight, Battle Creek; R. C. Stone, Battle Creek; Thos. Zelinsky, Battle Creek.

CASS.—Drs. J. H. Jones, Dowagiac; S. L. Loupee, Vandalia; W. A. McCutcheon, Cassopolis; M. P. White, Dowagiac.

CHIPPEWA.—Drs. C. J. Ennis, Sault Ste. Marie; C. W. Thompson, Newberry.

CLINTON.—Drs. A. O. Hart, Maple Rapids; W. A. Scott, St. Johns; James E. Taylor.

EATON.—Drs. A. H. Burleson, Olivet; W. E. Newark, Charlotte; T. L. Peacock, Sunfield; E. C. Palmer, Charlotte; P. H. Quick, Olivet; A. R. Stealey, Charlotte; F. A. Weaver, Charlotte; A. E. West, Kalamazoo.

GENESEE.—Drs. C. B. Burr, Flint; W. A. DeFoe, Otisville; D. S. Jickling, Flint; J. G. R. Manwaring, Flint; H. R. Niles, Flint; H. E. Randall, Flint.

GRAND TRAVERSE.—Drs. H. B. Garner, Traverse City; W. J. Schilliday, Lake Ann.

HILLSDALE.—Drs. B. F. Green, Hillsdale; W. H. Sawyer, Hillsdale.

HOUGHTON.—Drs. E. T. Abrams, Dollar Bay; J. T. Berry, Houghton; W. T. S. Gregg, Calumet; S. S. Lee, Opechee; A. I. Lawbaugh, Calumet; N. S. MacDonald, Houghton; John MacRae, Calumet; J. B. Quick, Kearsarge; A. B. Simonson, Calumet; W. K. West, Painesdale.

HURON.—Dr. D. J. Lackie, Grindstone City.

INGHAM.—Drs. R. H. Alexander, Dansville; C. H. Brucker, Lansing; Clara M. Davis, Lansing; G. M. Dunning, Lansing; O. H. Freeland, Mason; M. L. Holm, Lansing; Samuel Osborn, Lansing; E. F. Shaw, Williamston.

IONIA.—Drs. R. W. Alton, Portland; C. C. Dellenbaugh, Portland; J. F. Pinkham, Belding.

JACKSON.—Drs. A. E. Bulsen, Jackson; R. Grace Hendrick, Jackson; H. D. Hodge, Jackson; P. R. Hungerford, Concord; T. S.



Langford, Jackson; C. G. Parnall, Jackson; E. S. Peterson, Jackson; D. E. Robinson, Jackson; F. W. Rogers, Jackson; D. G. A. Seybold, Jackson; M. C. Strong, Jackson; G. E. Winter, Jackson; Nathan Williams, Jackson.

KALAMAZOO.—Drs. R. U. Adams, Kalamazoo; T. H. Ames, Kalamazoo; R. E. Balch, Kalamazoo; F. Elizabeth Barrett, Kalamazoo; W. P. Bope, Decatur; C. L. Bennett, Gobleville; E. J. Bernstein, Kalamazoo; C. E. Boys, Kalamazoo; E. J. Brady, Kalamazoo; G. T. Britton, Kalamazoo; E. D. Brooks, Kalamazoo; P. T. Butler, Kalamazoo; F. S. Collier, Vicksburg; G. D. Carnes, South Haven; Milton Chase, Otsego; L. E. Clark, Otsego; O. Clark, Kalamazoo; W. E. Collins, Kalamazoo; G. W. Cornish, Lawton; A. W. Crane, Kalamazoo; L. J. Crum, Richland; Walter den Blyker, Kalamazoo; J. G. Doehrer, Kalamazoo; D. H. Eaton, Kalamazoo; Alice B. Ellsworth, Kalamazoo; Blanche N. Epler, Kalamazoo; John Fletcher, Kalamazoo; C. B. Fulkerson, Kalamazoo; F. E. Grant, Kalamazoo; G. W. Green, Dowagiac; I. E. Hamilton, Lawton; A. Hochstein, Kalamazoo; W. F. Hoyt, Paw Paw; G. F. Inch, Kalamazoo; J. B. Jackson, Kalamazoo; W. Lang, Kalamazoo; G. W. Lawton, Kalamazoo; J. Levy, Kalamazoo; N. E. Leighton, Kalamazoo; S. R. Light, Kalamazoo; C. H. McKain, Vicksburg; J. C. Maxwell, Paw Paw; J. E. Maxwell, Decatur; C. M. Myers, Dowagiac; A. I. Noble, Kalamazoo; Herman Ostrander, Kalamazoo; Della P. Pierce, Kalamazoo; H. R. Pitz, Kalamazoo; T. H. Ransom, Bloomington; L. G. Rhodes, South Haven; A. L. Robinson, Kalamazoo; A. H. Rockwell, Kalamazoo; L. V. Rogers, Galesburg; E. D. Sage, Kalamazoo; B. A. Shepard, Plainwell; E. Shillito, Marcellus; Malcolm Smith, Allegan; S. B. Snyder, Fulton; J. W. Sooy, Allegan; B. H. Southworth, Schoolcraft; C. M. Spencer, Kalamazoo; D. E. Squires, Dowagiac; H. O. Statler, Kalamazoo; J. D. Stewart, Hartford; L. H. Stewart, Kalamazoo; W. A. Stone, Kalamazoo; E. R. Swift, Comstock; W. S. Tomkinson, Kalamazoo; F. H. Tyler, Kalamazoo; A. L. Van Horn, Otsego; J. H. Van Ness, Allegan; O. M. Vaughan, Covert; R. F. Wafer, Hartford; R. E. Weeks, Augusta; F. J. Welsh, Kalamazoo; A. H. Wicks, Hopkins; C. A. Wilkinson, Kendall; G. F. Young, South Haven; A. S. Youngs,

Kalamazoo.

KENT.—Drs. A. J. Parker, Grand Rapids; John Brady, Grand Rapids; J. D. Brook, Grandville; A. G. Burwell, Byron Center; Burton R. Corbus, Grand Rapids; W. J. DuBois, Grand Rapids; J. B. Griswold, Grand Rapids; Collins H. Johnston, Grand Rapids; N. H. Kassabian, Coopersville; T. M. Koon, Grand Rapids; A. M. Campbell, Grand Rapids; S. L. Rozema, Grand Rapids; Frances Rutherford, Grand Rapids; R. R. Smith, Grand Rapids; R. H. Spencer, Grand Rapids; F. C. Warnshuis, Grand Rapids.

LAPEER.—Dr. J. W. Frazier, Lapeer.

LENAWEE.—Drs. C. A. Blair, Morenci; R. M. Eccles, Blissfield; P. B. Hardy, Tecumseh; G. H. Lamley, Blissfield; L. G. North, Tecumseh; I. L. Spalding, Hudson; L. S. Town, Geneva; O. W. Whitney, Jasepr.

MACOMB.—Dr. Joseph M. Croman, Mt. Clemens.

MANISTEE.—Dr. J. A. Christenson, Manistee; A. A. McLarty, Manistee.

MASON.—Dr. G. O. Switzer, Mason.

MECOSTA.—Drs. W. T. Dodge, Big Rapids; L. S. Griswold, Big Rapids.

MIDLAND.—Dr. F. A. Towsley, Midland.

MONROE.—Dr. C. T. Southworth, Monroe.

MONTCALM.—Drs. W. H. Belknap, Greenville; D. K. Black, Greenville; H. L. Bower, Greenville; F. J. Fralick, Greenville; J. O. Nelson, Howard City; James Purdon, Edmore.

MUSKEGON.—Drs. J. T. Cramer, Muskegon; J. F. Denslow, Muskegon; F. W. Garber, Muskegon; G. J. Hartman, Muskegon; Jacob Oosting, Muskegon; G. S. Williams, Muskegon.

NEWAYGO.—Dr. Chas. Long, Fremont.

OAKLAND.—Drs. E. A. Christian, Pontiac; Mason W. Gray, Pontiac.

O. M. C. O. R. O.—Dr. A. C. MacKinnon, Lewiston.

OSCEOLA.—Dr. H. L. Foster, Reed City.

OTTAWA.—Drs. T. A. Boot, Holland; D. G. Cook, Holland; Henry Kremers, Holland; J. A. Mabbs, Allegan; J. H. Mowers, Fennville; J. F. Peppler, Byron Center; H. J. Poppen, Holland; F. D. Smith, Coopersville.

ST. CLAIR.—Drs. G. S. Ney, Port Huron; C. B. Stockwell, Port Huron; Mortimer Will-

son, Port Huron.

ST. JOSEPH.—Drs. R. E. Dean, Three Rivers; D. M. Kane, Sturgis; F. C. Kinsey, Three Rivers; J. H. O'Dell, Three Rivers; F. W. Robinson, Sturgis; W. A. Rogers, Mendon; Morden Sabin, Centerville; W. H. Snyder, White Pigeon.

SANILAC.—Dr. J. A. Fraser, Lexington.

SCHOOLCRAFT.—Dr. G. M. Livingston, Manistique.

SHIAWASSEE.—Drs. J. N. Eldred, Chesaning; W. E. Ward, Owosso.

TRI-COUNTY.—Dr. A. E. Stickley, Mesick.

TUSCOLA.—Dr. M. M. Wickware, Cass City.

WASHTENAW.—Drs. J. F. Breakey, Ann Arbor; M. L. Cushman, Ann Arbor; C. G. Darling, Ann Arbor; Conrad Georg, Jr., Ann Arbor; B. H. Honeywell, Ann Arbor; J. W. Keating, Ann Arbor; G. M. Kline, Ann Arbor; I. Loree, Ann Arbor; J. G. Lynds, Ann Arbor; T. W. Paton, Ypsilanti; M. J. Rowe, Ann Arbor; G. Slocum, Ann Arbor; F. Smithies, Ann Arbor; Jeanne C. Solis, Ann Arbor; J. G. Van Zwaluwenberg, Ann Arbor; V. C. Vaughan, Ann Arbor; A. S. Warthin, Ann Arbor; J. A. Wessinger, Ann Arbor; John F. Woods, Chelsea.

WAYNE.—Drs. C. D. Aaron, Detroit; J. N. Bell, Detroit; A. P. Biddle, Detroit; A. W. Blain, Detroit; D. M. Campbell, Detroit; Flemming Carrow, Detroit; J. W. Carstens, Detroit; D. R. Clark, Detroit; Grace M. Clarke, Detroit; Guy L. Connor, Detroit; Leartus Connor, Detroit; T. B. Cooley, Detroit; James E. Davis, Detroit; W. M. Donald, Detroit; M. A. Feeheimer, Detroit; Johann Flintermann, Detroit; Hugo A. Freund, Detroit; L. W. Haynes, Detroit; P. M. Hickey, Detroit; L. J. Hirschman, Detroit; C. W. Hitchcock, Detroit; A. D. Holmes, Detroit; Florence Huson, Detroit; W. H. Hutchings, Detroit; David Inglis, Detroit; W. E. Keane, Detroit; S. J. Lachajewski, Detroit; C. T. McClintock, Detroit; Angus McLean, Detroit; R. E. Mereer, Detroit; W. H. Morley, Detroit; Anna Odell, Detroit; R. W. Odell, Detroit; W. R. Parker, Detroit; R. Parmeter, Detroit; I. L. Polozker, Detroit; F. W. Robbins, Detroit; B. R. Schenck, Detroit; G. A. Sherman, Detroit; B. R. Shurly, Detroit; E. B. Smith, Detroit; F. B. Tibbals, Detroit; H. R. Varney, Detroit; J. W.

Vaughan, Detroit; V. C. Vaughan, Jr., Detroit; F. B. Walker, Detroit; J. Watkins, Detroit; H. W. Yates, Detroit.

CHICAGO, ILL.—Drs. Archibald Church, Arthur R. Edwards, Bayard Holmes and Wm. Whitford.

## Book Notices

**Constipation and Intestinal Obstruction.** By Samuel G. Gant, M.D., LL.D., Professor of Disease of the Rectum and Anus in the New York Post-Graduate Medical School and Hospital. Octavo of 559 pages, with 250 original illustrations. Philadelphia and London: W. B. Saunders Company, 1909. Cloth \$6.00 net.

This work of Gant contains many ideas which are comparatively new, and a perusal of its pages will convince one of the advances which have been made in the last few years in the treatment of that ever present symptom, constipation. The reader will also be impressed with the idea that constipation, or obstipation, is much more frequently caused by mechanical means than he has been wont to consider, and that the role of drugs in its treatment is a minor one. Psychotherapy, diet, physical measures, such as massage, vibration and electricity, and surgical measures are all discussed in great detail.

Most of our standard works contain many pages on acute obstruction and on chronic obstruction when caused by the more severe and serious lesions of the abdominal cavity. Few books, on the contrary, consider the milder forms of chronic obstipation causing slight disturbances and ill-health but rarely ending in death. It is these milder forms to which Gant gives his attention.

An outline of the work is as follows:—Three chapters on anatomy and physiology; two on classification and general etiology; four on mechanical or surgical causes; four on symptomatology and diagnosis; one each on the treatment of the complications and on constipation in infants and children; 13 on treatment; 11 on the surgical treatment, in the course of which many conditions are considered, such as the various ptoses, tumors, impaction, adhesions, diverticula, hernia, intussusception, etc.

The author has invented some operations for enteroptosis which seem somewhat weird, for example, the coloplexy figured on page 490, where he advocates suspending the bowel over the

rectus muscle, and his coloplexy with invagination, in which, after fixing the bowel to the abdominal wall, a portion of the upper part of the sag is pushed into the lower and anchored there. These are heroic measures, which at first blush appear dangerous, but the author says they are not. Time will tell. Surely not many operators will care to attempt them, at least until they have been tried on the dog.

The book is one out of the ordinary. It may be said to be in advance of the times. It is optimistic. It makes one think. It is well worth while.

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**Diseases of the Digestive Canal (Esophagus, Stomach, Intestines).** By Dr. Paul Cohnheim, Specialist in Diseases of the Stomach and Intestines in Berlin. From the second German edition, Edited and Translated by Dudley Fulton, M.D., Lecturer on Medicine, University of Southern California, Los Angeles. J. B. Lippincott Company, Philadelphia and London.

The distinctive feature of this book is, as mentioned in the translator's preface, the discussion of the subject matter purely from the clinical point of view, prominence being given throughout to the subjective symptoms of the various affections. It was Cohnheim's intention in writing the book to omit any compilations of the views of others, discussions on theory and on pathology, review of the literature and complicated laboratory technic. Each subject is taken up in a succinct manner, being attacked with a certain directness that is commendable. The translation has been well made from the second German edition, which followed two years after the book was first published. The author, Cohnheim, has been for many years assistant to Boas in Berlin, and his book may be said to be founded on experience, rather than being a compilation of the many books on the subject.

The scheme of the volume is as follows:—There are two sections, a "general," comprising 46 pages, and a "special," comprising 320 pages. In the general section, subjective symptomatology, physical examination, chemical and microscopical methods of examination, the use of the stomach tube and laboratory apparatus are described. In the special section, the various diseases are taken up in order. The translator's style is good and the book is therefore very readable. Just enough case reports are used to illustrate a point; they are never tiresome. A good feature is the "Clinical A. B. C." in which the most important symp-

toms of the various affections are given.

We believe the book will be acceptable to everyone who wishes a concise, up-to-date book on the subject, free from "padding," and extremely practical.

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**Confessions of a Neurasthenic.** By William Taylor Marrs, M.D. Quarto, 114 pages, illustrated. F. A. Davis Company, Philadelphia.

This little book, purporting to be the autobiography of a dyed-in-the-wool neurasthenic, is written in a diverting style and is very readable. The trials and vicissitudes, imaginary and real, through which the hero passes, are narrated and suggestions implied, rather than directly pointed out. The volume is neatly and attractively printed and bound.

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**Diseases of the Eye.** By Chas. H. May, M.D., Chief of Clinic and Instructor in Ophthalmology, College of Physicians and Surgeons, Med. Dept., Columbia University, N. Y., Attending Ophthalmic Surgeon to the Mt. Sinai Hospital, New York, etc. Illustrated. Sixth edition. Pp. 391. Cloth. \$2.00. Wm. Wood & Co., New York, 1909.

This useful little Manual still retains its place as one of the best books on the eye for practitioners and students. It has been brought up to date in this latest edition, so as to give the student a comprehensive view of the whole subject without elaborating on those rarer conditions, that are the province of the specialist.

Such of the newer subjects as Transillumination, Cerebral Decompression and the Tuberculin eye reaction form excellent chapters. The colored plates and illustrations are especially good.

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**The Ophthalmic Year Book.** Vol. VI. The Herriek Book and Stationary Company, Denver, 1909.

Every ophthalmologist should feel grateful to the authors of the Year Book for placing the literature of each year in such a compact and accessible form.

In eye work, as in all other branches, one needs the lights and shadows projected by other men's views, to see things in their true light, and with a resumé of the literature so carefully abstracted before one, it reduces the probability of being afflicted with that serious condition—"contracted field."

Not the least value in this useful book is the complete index, giving quick reference both to subject and author.



## County Society News

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### Upper Peninsula Medical Society.

The seventeenth annual meeting of the Upper Peninsula Medical Society was held at Calumet, August 3rd and 4th, under the auspices of the Houghton County Medical Society. The meeting was a highly satisfactory one, and the attendance unusually good, when it is considered that the Upper Peninsula is one of "magnificent distances."

Dr. A. W. Hornbogen, in the President's address, called attention to "The Future Treatment of Gall Stone Disease." He said that the presence of gall stones is always a surgical condition, and the time is near when gall stones will be as commonly removed as a diseased appendix.

Statistics show 12 to 15 per cent. of all persons to have gall stones, and they are more common in women than in men. In a collection of 472 cases, 50% were in teachers, clergymen and others, engaged in sedentary occupations, and 20% of the insane suffer from them.

A catarrh of the gall bladder and bile ducts, due to infection from various micro-organisms, as the bacillus coli communis, typhoid bacillus, etc., is a frequent cause of gall stones.

In 13½% of cases of cholelithiasis there is an obstruction of the common duct. Autopsy would show a greater frequency of gall stone disease where a diagnosis of peritonitis, gastric disease, liver congestion, etc., is made. One constant symptom is indigestion. This may also be due to gastric ulcer or appendicitis. In gall stone disease, there is tenderness at the tip of the right tenth rib. Murphy's method of palpation for diagnosing gall-bladder disease was described.

"Brain Abscess" was the timely topic of a paper read by Dr. H. M. Cunningham, of Marquette. As a complication of middle ear and mastoid disease, it is more frequent than is commonly suspected. He laid particular stress on the importance of healing all cases with discharging ear disease as they are otherwise dangerous.

A case was cited of a child who was treated, at the age of 1½ years, for ear disease, and was given a favorable prognosis, as the discharge had practically ceased, except a slight discharge. This child had recently died at the age of ten years from Brain Abscess.

Dr. M. D. Roberts, of Hancock, read a paper on "Thrombo-Phlebitis and Its Relation to Phlegmasia Alba Dolens," in which he gave a digest of the theories advanced as to the etiology of this complaint, and the treatment. He said that phlebitis may be regarded as a lymphangitis of the vein wall, as the inflammation extends along the lymph spaces and vessels with which the wall is richly supplied. When the inflammation extends to the arteries and thrombosis results we have phlebo-thrombosis, and as it originates from without, the condition is also called extra-vascular. Where the phlebitis results from a thrombosis, it is termed thrombo-phlebitis, also termed intra-vascular or hematogenous. In the majority of cases their differentiation is impossible.

In summarizing the theories as to the etiology of thrombo-phlebitis, he finds that the causes are:—

1. An atonic condition of the system.
2. A vitiated condition of the blood following disease, pregnancy and delivery, and an excess of fibrin in the blood during the later months of pregnancy and the puerperium.
3. A chronic inflammatory condition of the bowels that may extend to the pelvic tissues during gestation.
4. Stagnation of the blood in the extremities from pressure.
5. But the majority of cases, influenced by the previous conditions, result from septic infection.

Dr. F. J. Larned, of Greenland, read an interesting and instructive paper on "Chronic Interstitial Nephritis." He devoted considerable attention to its pathology and symptomatology, and said that this disease may be met with in three forms.

1. As the secondary stage of the large white kidney, resulting from the contraction of the increased connective tissue.
2. As a primary affection.
3. As a result of, or as some authorities claim, as a part of a general arterio-sclerosis.

Among the important signs of the disease are, the character of the urine, the physical properties being in many cases more important than the microscopic or the chemical. The quantity greatly increased, the specific gravity low. The pulse tension, and the sclerosis of the vessel wall are of value in diagnosis, as well as the hypertrophy

of the left ventricle and later the enlargement of the heart. The eyes are very commonly affected and the oculist may be the first to make a diagnosis.

The paper on "Direct Transfusion, Indications and Technique" by Dr. W. E. McNamara of Freda, was read before the County Society, and a synopsis given in a previous issue of the Journal, as was also the paper on "The Sphygmomanometer" by Dr. A. B. Mills of Calumet.

Dr. A. I. Lawbaugh of Calumet, read a paper on "Fibroid Tumors Complicating Pregnancy." He dwelt especially on their dangers in this condition, stating that they are not so dangerous when located near the fundus of the uterus as when they are located near the cervix. Here they prevent the uterus from ascending during pregnancy.

The submucous fibroid tends to interrupt pregnancy, and in the majority of cases, produces sterility. The subperitoneal fibroid may be dangerous from pressure on the peritoneum, tending to set up a localized peritonitis, accompanied by great pain. He described a case of this kind in which opiates failed to relieve the pain. A pedunculated fibroid about the size of a large orange was removed at the fourth month of pregnancy. The patient went on to full term with the relief of all symptoms.

Dr. H. J. Hornbogen of Marquette, read a paper on "Cases of Hysteria as Manifested in the Eye and Throat," in which he related interesting experiences with this condition.

A banquet was tendered to the visiting physicians at the Calumet Hotel, with 55 members present. Following the banquet, Drs. W. T. S. Gregg and G. M. Rees of Calumet, exhibited a series of Radiograms of Fractures treated at the Tamarack and the Calumet and Hecla Hospitals. They showed radiograms of fractures during various stages of the healing process. They were very interesting and instructive and were highly appreciated by the society.

The following officers were elected for 1910:—

President, Dr. E. T. Abrams, Dollar Bay; 1st Vice-President, Dr. Robert B. Bennie, Sault Ste. Marie; 2nd Vice-President, Dr. John MacRae, Calumet.

On behalf of the Chippewa County Medical Society, Dr. C. J. Ennis extended an invitation to hold its next meeting at Sault Ste. Marie. This was enthusiastically accepted and the society will hold its 1910 meeting in that city.

After the meeting was adjourned, the visiting members were taken in automobiles to various places of interest in the county.

JOHN MACRAE, Sec'y.

### Chippewa.

The Chippewa County Medical Society held its first fall meeting at Munoskong Club as guests of Dr. J. A. Cameron of Pickford. We went down in Dr. McCandless' launch and had a very enjoyable time, being entertained royally.

Two papers were read, one by Dr. Yale on "Diphtheria," and the other by Dr. Willison on "The Dispensing of Medicines." They were very interesting papers, and the society is going to take up the matter of "Counter prescribing by Druggists" at some future meeting.

The society elected Dr. A. J. Murchison of Charlottetown, Prince Edward Island, who is visiting here, an honorary member.

The following members from the Soo were present:—Drs. Ennis, Dickison, F. Townsend, McCandless, Yale, Webster, Willison, Winslow, McDonald, Griffin, Fournier, Lyon, Murchison, Gostanian, and J. A. Cameron, and Walz of Pickford.

JAMES GOSTANIAN, Sec'y.

### Eaton.

Considering the weather, the attendance and interest in the second quarterly meeting of the Eaton County Medical Society, held in Charlotte, July 29, 1909, were very good. The time was mostly taken up by the discussion of and appointment of committees for the meeting of the Third Councilor District. Present indications are that the meeting will be a pronounced success. The time has not been definitely decided upon, but it will probably be in the second or third week of October. Charlotte has been chosen as the meeting place, being the most accessible by rail. All residents of the Third Councilor District will be notified in due time to make arrangements for leaving home one day.

Eaton County Medical Society is sponsor for the success of the meeting.

A. H. BURLERSON, Sec'y.

### Houghton.

The July meeting of the Houghton County

Medical Society was held at the Hotel Scott, Hancock, with twenty physicians, over one-third of the membership present.

Dr. G. M. Rees reported "Some Interesting Cases of Appendicitis," five cases presenting severe gastric symptoms, gastric tenderness, pain and vomiting, coming on at irregular intervals and pointing to gastric ulcer. In the first case the failure to give relief by local gastric treatment and rectal feeding, suggested some surgical lesion. The patient was a sufferer from frequent attacks of illness, entailing the loss of a large percentage of his time, and was ready to submit to any procedure that gave any promise of relief. An operation for appendicitis was performed, and although there were no local signs in the region of the appendix, it was found extensively diseased, and the operation was followed by complete recovery.

The other four cases were of the same character, presenting gastric symptoms only, with no local signs of diseased appendix, yet in every case, operation revealed a diseased appendix, with extensive adhesions in some. All terminated in complete recovery. In the discussion Dr. Lawbaugh referred to an article by Dr. Carstens, written some years ago, describing such cases.

Dr. M. D. Roberts of Hancock, reported a "Case of Phlebitis Following Labor," in a primipara aged 25 years, who had a normal delivery, with no complication except a slight perineal tear, which was repaired. On the third day the temperature was 101°, pulse 130. Pain in leg on fifth day. On the ninth day, a curettment was done, but there were no clots or membrane. On the 15th day, a marked swelling of the leg appeared, requiring elevation.

Dr. R. V. Armimen reported a case which he had in the same house eight months before, with labor normal and no vaginal examination made. The etiology and pathology of this complication is an interesting one and Dr. Roberts will present a paper on this subject at a future meeting.

Dr. N. D. MacDonald of Hancock, reported "A Case of Abdominal Hematoma Following Operation for the Radical Cure of Inguinal Hernia." He said that hemorrhage after hernia operations is an accident which occasionally follows our efforts at a radical cure. In his experience he has had three cases with quite severe hemorrhage. In two of these the bleeding was from the cord and canal, and was due to blood dyscrasia. The

last case here reported was due either to a faulty ligation, or the puncture of a vessel at the neck of the sac. The operation was performed May 22, 1909, for left inguinal hernia. Catgut was used for the ligation of the sac, and kangaroo tendon for the closure of the canal.

The nurse reported the following morning that the patient's pulse grew suddenly worse during the night following the operation, but there was no oozing from the wound, and aside from abdominal pain and some rigidity, his condition was good, with pulse 100, temperature 99°. His convalescence was uneventful with primary union and recovery in two weeks. The third week he came to the office complaining of abdominal pain and constipation. An examination of the abdomen revealed a well defined tumor about the size of a child's head, occupying the right quadrant. On account of its location on the opposite side from the hernia, hematoma was not suspected. An exploratory incision was made June 22, a hematoma found with contents of a tarry consistency and on a fair way to recovery by absorption. The cavity was emptied and sponged as dry as practicable and at present there is no evidence of recurrence.

Dr. W. S. Jackson, of Houghton, read a paper on "The Tonsil and Its Relation to Disease," in which he claimed that this structure does not receive the attention that its importance demands, while physiologically its scientific interest lies in its protective function to the organism. It acts as a filter to rid the lymph of micro-organisms and foreign bodies.

While the tonsil has a protective action, it is especially liable to inflammation in consequence of infection and thus is the source of general infection. Instead of being protective it is the nidus for the growth and distribution of organisms and their poisonous products into the system, and thus the portal of entry for many grave and fatal general infections.

The exanthemata probably enter the system in this way: Acute articular rheumatism and diseases associated with it, as endocarditis and chorea, often enter the system through a diseased tonsil. A bacteriologic and histologic examination of the tonsil would often shed light on fevers of uncertain origin.

Of the two types of diseased tonsil, the hypertrophic and the atrophic, the latter is often unsuspected as a cause of ill-health in children and even adults. In a recent report in the *Johns*



*Hopkins Bulletin* of the removal of 200 atrophic tonsils, 196 were found to be so diseased as to give rise to ill health. Their removal resulted in improved health to the patient.

Dr. W. K. West of Painesdale, gave a report on "Points Gleaned From the Last Meeting of the American Medical Association." He said the meeting was scientifically interesting and valuable. To see and hear so many of the leading men of the profession was both interesting and stimulating. He referred to a number of papers read in the surgical section, particularly to the paper by Beck on the use of bismuth paste in empyema and lung abscess. In the discussion, Murphy stated that he uses 2% formalin in glycerine. The paper by Arbuthnot Lane on the open treatment of fractures was also referred to.

JOHN MACRAE, *Sec'y.*

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#### Kent.

The Kent County Medical Society resumed its regular meetings on September 29th. The paper of the evening was read by Dr. Earl Bigham, subject "The Prevention and Treatment of Post-partum Hemorrhage." The program committee has already completed arrangements with a number of out of town men who will appear before the society this coming winter. The Society Bulletin is again being issued. The Secretary will be glad to send it to any County Secretary in the State upon receipt of stamps to cover postage.

F. C. WARSHUIS, *Sec'y.*

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#### Wayne.

The Wayne County Society resumed its meetings for the year on September 30th. The secretary read his report showing a healthy condition of the membership roll and of the finances. Dr. A. H. Bigg, retiring vice-president, in the absence of the retiring President, Dr. W. P. Manton, read the latter's address. Dr. A. D. Holmes, President for 1909-1910, was inaugurated and outlined his policy for the coming year.

The Medical Section met on September 15th. A lively discussion on the ever recurring problem of purer milk for Detroit took place. Dr. R. S. Rowland opened the program with remarks. He spoke of the importance of the subject from

different viewpoints and especially emphasized the great need of a clinical milk, as distinct from one intended for general domestic purposes. The discussion was continued by Drs. Cooley, Delbridge, Kiefer, Parmalee and Safford.

The program of the meeting of the Surgical Section for September 27th, included the Report of a Case of Ureteral Calculus, by Dr. F. B. Walker, and a paper on "The Surgical Treatment of Pruritus Ani," by Dr. L. J. Hirschman.

*Abstract:*—Pruritus Ani is such an important and distressing symptom of many rectal diseases as well as of constitutional, parasitic, and dermatological diseases, that it is considered as if it were a disease entity itself. After discussing etiology and pathology of local rectal diseases exhibiting pruritus as their principal symptom, and describing the appearance of the anus in the patient suffering from this condition, the author took up the surgical measures directed particularly to the relief of the itching. He emphasized the extreme importance of a thorough examination of the rectum and anus in all cases presenting pruritus as a predominating symptom.

In these cases of pruritus ani in which the circum-anal integument is hypertrophied and thrown into heavy folds and the sulci between are irritated, fissured, and discharging, the removal of these folds under local anesthesia was advised; and the technique described. Where the pruritus is most persistent at the posterior anal commissure, and ulcer of the anal canal, or fissure is present, the removal of a kite-shaped piece of skin and mucous membrane was advised, and the technic for the operation under local anesthesia detailed.

The fact that many cases of pruritus are caused by the irritating discharge poured forth from the diseased Morgagnian crypts, a sub-mucous fistula opening into these crypts, and hypertrophied anal papillae, was brought forth, and the technic for the surgical relief of the various conditions described in detail.

For these inveterate cases which have resisted all other forms of treatment, Ball's operation and Krouse's modification of the same were advised. The author gave his technic for these procedures and described his method of operating under local anesthesia. In this operation all the sensory nerve twigs supplying the affected area of circum-anal integument are severed, and the pruritus is immediately and permanently relieved.

PROCEEDINGS OF THE FORTY-FOURTH ANNUAL MEETING OF THE MICHIGAN STATE MEDICAL SOCIETY, HELD AT KALAMAZOO, SEPTEMBER 15 AND 16, 1909.

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**Council.**

The first session of the Council of the Michigan State Medical Society was called to order by Chairman Burr at 3:30 P.M., Tuesday, September 14th, 1909, in the Academy of Medicine Rooms, Kalamazoo.

Present: Chairman Burr, Councilors Hirschman, Bulson, Rockwell, Spencer, Ennis, Haughey; President Lawbaugh, and State Secretary Schenck.

The minutes of the last meeting were read and approved.

The Secretary reported that soon after the January meeting of the Council, Dr. H. J. Hartz wrote desiring that a ballot of the Council be taken in order to obtain an opinion on the New York Tuberculosis Bill; that such ballot had been taken by mail and a copy of the replies of the Councilors forwarded to Drs. Hartz and Sawyer.

Dr. Rockwell moved that Dr. Willis S. Anderson of Detroit be declared unanimously elected as Treasurer of the State Society to fill the unexpired term of Dr. George W. Moran, and that the Secretary cast the ballot of the Council for his election. Supported by Dr. Hirschman and carried. The Secretary cast the unanimous ballot of the seven members present for Dr. Willis S. Anderson of Detroit, for Treasurer for the unexpired term, and he was declared elected.

The Report of the Council to the House of Delegates was read by Chairman Burr and on motion of Dr. Spencer, supported by Dr. Rockwell, the report was adopted as read.

Dr. Bulson moved the adoption of the following resolution:

RESOLVED, That the Council looks with extreme disfavor on action on the part of any County Society contemplating the expulsion from membership because of consultation with or affiliation with some member of the profession legally qualified to practice medicine, but not a member of the County Society.

Dr. Hirschman supported the motion. Carried.

Dr. Spencer asked permission to present to the Council Mr. Arnold, the father of a bill

passed by the legislatures of North Dakota and Minnesota to purify the advertising matters in Newspapers.

Mr. Arnold addressed the Council telling briefly of his methods and the results obtained, after which the Council adjourned.

The second session of the Council was called to order in the Rooms of the Academy of Medicine at 2:00 P. M., Wednesday, September 15, 1909 but as nothing had been referred from the House of Delegates or General Session, an adjournment was taken without transacting any business.

The third session of the Council was called to order by Vice-Chairman Dodge on the morning of September 16, 1909, in the Y. M. C. A. Rooms.

Present: Councilors Dodge, Bulson, Spencer, Willson, Rockwell, Ennis, Biddle, Haughey, State Secretary Schenck and President Elect J. H. Carstens.

The minutes of the last two sessions were read and approved.

The Chairman introduced Dr. A. P. Biddle of Detroit, who had been elected Councilor for the First District, and also announced that Dr. A. M. Hume of Owosso had been elected Councilor for the Sixth District.

Dr. W. T. Dodge was elected Chairman of the Council and Dr. W. H. Haughey was re-elected Secretary of the Council.

Dr. Spencer moved that the usual compensation of \$50.00 to the Secretary and \$50.00 to the Stenographer of the Council be granted for the ensuing year. Supported by Dr. Willson and carried.

The Chair announced that inasmuch as a system of Medical Defense had been adopted by the State Society it entailed upon the Council the duty of electing an Executive Board of the Medico-Legal Committee, this Board to consist of five members.

The following nominations were made:

Dr. F. B. Tibbals, Detroit, for 5 years.

Dr. C. B. Stockwell, Port Huron, for 4 years.

Dr. E. C. Taylor, Jackson, for 3 years.

Dr. Chas. W. Hitchcock, Detroit, for 2 years.

Dr. Johann Flinterman, Detroit, for 1 year.

Moved by Dr. Rockwell that the nominees be declared unanimously elected, and that the Secretary be instructed to cast the ballot of the Council for their election. Supported by Dr. Willson and carried. The Secretary cast the unanimous ballot of the Council for the above-named gentlemen as members of the Executive Board of the Medico-Legal Committee, and they were declared elected.

Dr. Wilson moved that Dr. Tibbals be made Chairman of the Executive Board. Supported and carried.

Chairman Dodge appointed the following committees:

Committee on Finance.

B. H. McMullen, Cadillac.

A. L. Seeley, Mayville.

C. H. Baker, Bay City.

Committee on Publication.

A. P. Biddle, Detroit.

M. Willson, Port Huron.

R. H. Spencer, Grand Rapids.

A. M. Hume, Owosso.

Committee on County Societies.

W. H. Haughey, Battle Creek.

A. E. Bulson, Jackson.

A. H. Rockwell, Kalamazoo.

E. J. Ennis, Sault Ste. Marie.

Moved by Dr. Willson that the Secretary be empowered to expend the necessary amount to entertain the County Secretaries at their next meeting, not to exceed \$75.00. Supported by Dr. Biddle and carried.

Dr. Willson moved that the Council recommend to the County Societies that where possible they pay the expenses of the Secretaries to the Annual Meeting of County Secretaries. Supported by Dr. Rockwell and carried.

Dr. Bulson asked for the experience of the Councilors in holding District Meetings, stating that in the Second District these had not been as successful as could be wished. Responses were made by all Councilors present and it seemed to be the general belief that these meetings were more successful if not held too often, one in two or three years bringing the best results.

Dr. Carstens, the President-Elect, was introduced to the Council by Chairman Dodge, after which, there being no other business, the Council adjourned.

W. H. HAUGHEY,  
Secretary of the Council.

## House of Delegates.

The first session of the House of Delegates of the Michigan State Medical Society for 1909, was called to order by President Lawbaugh, in the Y. M. C. A. Auditorium, at 8:30 P. M., Tuesday, September 14, 1909.

Roll call was dispensed with.

The minutes of the last meeting were read (in abstract) by Secretary Schenck and approved.

The Report of the Council was read by Dr. C. B. Burr, Genesee, Chairman, and on motion of Dr. Biddle, Wayne, was accepted and referred to the Business Committee to be created later. See page 491.

Report of Committee on Legislation and Public Policy and on the work of the National Legislative Council was read by Dr. W. H. Sawyer, Hillsdale, Chairman, and on motion was accepted and placed on file. See page 494.

Report of the Committee on Medical Defense was read by Dr. Frank B. Tibbals, Wayne, Chairman. See page 495.

The various amendments to the By-Laws incorporated in this report were discussed at length by Drs. Breakey, Niles, Rogers, Burr, DuBois, Spaulding, Biddle, Langford and Dodge, and were accepted, section by section, as read by Dr. Tibbals.

Moved by Dr. Robbins, Wayne, that the amendments to the By-Laws as accepted be laid upon the table until Wednesday morning. Dr. Breakey, Washtenaw, moved as an amendment that final action be deferred until Thursday morning. Amendment accepted. The motion as amended was supported and carried.

Under miscellaneous business, nominations for membership on the Committee on Nominations were made as follows:

Dr. F. B. Tibbals, Wayne.

Dr. W. J. DuBois, Kent.

Dr. L. S. Griswold, Mecosta.

Dr. C. T. Southworth, Monroe.

Dr. N. S. MacDonald, Houghton.

Upon the withdrawal of Dr. Tibbals the name of Dr. C. B. Stockwell, St. Clair, was placed in nomination.

Moved by Dr. Holmes, Wayne, that the Secretary cast the ballot of the House of Delegates for the five members as nominated. Carried.

Secretary cast the ballot and the Committee was declared elected.

The President appointed the following Business Committee:



Dr. Livingston, Schoolcraft.  
Dr. Wessenger, Washtenaw.  
Dr. Kinsey, St. Joseph.  
Dr. Fraser, Sanilac.  
Dr. Holmes, Wayne.

The Secretary read the following amendment to Section 3, of Chapter III. of the By-Laws which was laid over from the last meeting of the House of Delegates:

Such amendment adds to Section 3 the following: "No paper shall be read by title nor read by any other person than its author, except as a result of sickness of author or by unanimous vote of the section to which it belongs."

Dr. Southworth, Monroe, moved the adoption of the amendment as read. Supported and carried.

By Dr. Robbins: Resolved: That a committee of five be appointed by the President, tomorrow, to report at the Annual Meeting of 1910 as to the relation of the Medical Department of the University of Michigan to the Medical Profession of the State.

The resolution was supported and adopted.

Dr. Christian, Oakland, presented the following preamble and resolution:

At the regular meeting of the Oakland County Medical Society held September 2, 1909, in Royal Oak, it was moved, supported and carried that the delegate of the society be directed to secure the passage by the House of Delegates at the Kalamazoo meeting of the Michigan State Medical Society of the following:

*Whereas*, the increasing prevalence in Michigan of lodge practice is a serious menace to the welfare of the profession of the state and an obstacle to professional organization, therefore;

*Resolved*, that the House of Delegates of the Michigan State Medical Society recommends that the county societies use such measures to prevent, abolish or modify this objectionable practice as varying local conditions require.

Dr. Christian asked that this matter be laid upon the table until the next session of the House.

Dr. Shurly, Wayne, offered the following amendment to Section 1, Chap. VII., By-Laws, which has to do with the duties of officers and which would read as follows:

4th line, after the word "for" referring to the duties of the President there should be inserted the following:

"shall fill all vacancies not otherwise provided for occurring by reason of death, disability, res-

ignation or removal, of any officer, councilor or member of any committee occurring during the fiscal year of the Society."

The proposed amendment was laid over under the rules for one day.

On motion the House of Delegates adjourned to meet Wednesday morning, at 8:30 A. M.

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### Second Session.

The second session of the House of Delegates was called to order by President Lawbaugh at 9:00 A. M. Wednesday, September 15th, in the Y. M. C. A. Auditorium.

The minutes of the previous session were read by Secretary Schenck and approved.

The following amendment to By-Laws, which had been laid over under the rules was read by the Secretary:

Amendment to Section 1, Chapter VIII., By-Laws, on the fourth line after the word "for" insert the following:

"shall fill all vacancies not otherwise provided for occurring by reason of death, disability, or removal of any officer, councilor, or member of any committee, occurring during the fiscal year of the Society."

Moved by Dr. Biddle, Wayne, that the amendment to the By-Laws be adopted. Supported and carried.

The Report of the Committee on the Study and Prevention of Tuberculosis, Dr. H. J. Hartz, Wayne, Chairman, was read by the Secretary. See page 498.

Moved by Dr. Biddle, Wayne, that the report be accepted. Supported and carried.

The Report of Committee to Encourage the Systematic Examination of the Eyes and Ears of School Children throughout the State, was read by Dr. Walter R. Parker, Wayne, Chairman, and on motion was accepted and placed on file. See page 497.

Moved by Dr. Connor, Wayne, That this Committee be requested to join with the Councilors in having each County in the State make arrangements to spend one session in the discussion of this topic, and make such arrangements as the particular conditions and environment of that County may require. Supported and carried.

Dr. Christian, Oakland, moved that the following preamble and resolution be taken from the table:

*Whereas*, the increasing prevalence in Michigan of lodge practice is a serious menace to the welfare of the profession of the State and an obstacle to professional organization, therefore;

*Resolved*, that the House of Delegates of the Michigan State Medical Society recommends that the county societies use such measures to prevent, abolish or modify this objectionable practice as varying local conditions require.

Motion supported and carried.

Moved by Dr. Christian, Oakland, that the above preamble and resolution be adopted. Supported and carried.

Dr. Livingston, Schoolcraft, Chairman of the Business Committee, moved the adoption of the following resolution:

*Whereas*, it has pleased Almighty God to remove from the ranks of our society, Dr. George W. Moran, a faithful and consistent officer and member, and an eminent practitioner of our art.

*Therefore be it Resolved*, that in the death of Dr. Moran the Michigan State Medical Society has sustained an irreparable loss and that the sympathy of this organization be and is hereby extended to his family and friends.

*Be it further Resolved*, that these resolutions be spread upon the minutes of this society and a copy of the same be transmitted to the family of the deceased.

Resolution supported and carried.

The following recommendations of the Business Committee were adopted:

Your committee desires to report farther that it greatly deplores the falling off in membership in several of the counties as reported by our Secretary and would recommend that the Council put forth renewed effort to overcome this defection. In accordance with the suggestion of our Secretary your committee desires also to recommend that the meeting of the County Secretaries be held concurrently with that of the Council. Your committee also recommends that the various county societies put forth greater effort toward the furnishing of items of interest for publication in our State Journal.

Your committee further recommends that the suggestion of the Chairman of the Council relative to the appointment of a committee to secure legislation making it a misdemeanor to use the term "certified milk" except by a regularly organized medical milk commission be concurred in.

Dr. Livingston, Schoolcraft, moved that the

President of the Society appoint a committee of three to draft suitable resolutions in connection with the removal of Councilor George Dock from this State. Supported and carried.

The President appointed Drs. Wm. F. Breakey, Washington; Dr. A. E. Bulson, Jackson, and Leartus Connor, Wayne.

On motion the House of Delegates adjourned to Thursday morning.

### Third Session.

The third session of the House of Delegates was called to order in the Y. M. C. A. auditorium, Kalamazoo, by the Secretary, pending the arrival of the President who was delayed.

On motion, Dr. H. B. Garner, Grand Traverse, was chosen Chairman.

The minutes of the previous session were read by the Secretary and approved.

Dr. Livingston, Schoolcraft, Chairman of the Business Committee, made the following report:

"Your committee begs leave to recommend the following resolutions:

*Resolved*, that the Council of the Michigan State Medical Society be and is hereby instructed to make arrangements whereby each and every component County Medical Society shall hold at least one meeting during the coming year, which shall be devoted wholly to the consideration of the subject of Tuberculosis."

Dr. Tibbals, Wayne, moved the adoption of the above resolution. Supported and carried.

"Your committee further recommends as follows: That a committee of five be appointed by the President to work in conjunction with the Committee on Legislation and Public Policy to secure such legislation as may be necessary to protect the term 'certified milk.'

Moved by Dr. Robbins, Wayne, that the resolution be adopted. Supported and carried.

Dr. Breakey, Washtenaw, Chairman of the Special Committee to draft suitable resolutions in connection with the removal from our state of Dr. George Dock, reported as follows:

"Your committee to whom was referred the duty of expressing the regret of this Society at its loss by the removal from the State of Dr. George Dock, so long an able and active member of the society, respectfully report that while we miss his cheerful presence, his enthusiastic interest and vigorous aid in all scientific work of the Society and the welfare of the profession,

we are glad to feel that we have the fruits of his work while with us, and that we endorse the very deserved estimate of his service so well stated by the Chairman of the Council in his address to the society.

His devotion to rational medicine is not limited by states or countries and we feel assured we can still count on his interest and aid.

We congratulate Tulane University which has secured his valuable services and our best wishes go with him for his continued prosperity in his new field of work.

We recommend that he be made an honorary member of this society and a copy of these resolutions be sent to him.

Signed: W. F. BREakey,  
A. E. BULSON,  
LEARTUS CONNOR."

Dr. DuBois, Kent, moved that the resolutions be adopted. Supported and carried.

Dr. Southworth, Monroe, for the Committee on Nominations, made the following report:

"Your Committee on Nominations begs to make the following report:

Place of Meeting for 1910—Bay City.

Time—September.

First Vice-President—Virgil Tupper, Bay.

Second Vice-President—F. H. Webster, Chipewa.

Third Vice-President—J. F. Breakey, Wash-tenaw.

Fourth Vice-President—R. M. Eeles, Lenawee.

Councilor 1st District—A. P. Biddle, Detroit.

Councilor 3rd District—W. H. Haughey, Battle Creek.

Councilor 6th District—A. M. Hume, Owosso.

Councilor 11th District—W. T. Dodge, Big Rapids.

Delegate to the A. M. A.—E. T. Abrams, Dollar Bay.

Alternate Delegate to A. M. A.—R. E. Baleh, Kalamazoo.

Signed: W. J. DuBois,  
C. T. SOUTHWORTH,  
N. S. MACDONALD,  
L. S. GRISWOLD."

Dr. Robbins, Wayne, moved that the report of the committee be adopted as read. Supported and carried.

Moved by Dr. Hitchcock, Wayne, that the amendments to the By-Laws in relation to Medical Defense be taken from the table. Supported and carried.

Moved by Dr. Rockwell, Kalamazoo, that the amendments to the By-Laws as presented by the Special Committee on Medical Defense be adopted. Supported. After some discussion the motion was withdrawn.

Moved by Dr. Dodge, Big Rapids, that the House of Delegates is in favor of the adoption of a system of Medical Defense by the Michigan State Medical Society. Supported.

The subject of Medical Defense and its relation to the State Society was discussed at length by Drs. Rogers, Jackson; Leartus Connor, Wayne; Bell, Wayne; Langford, Jackson; Dodge, Mecosta; Rockwell, Kalamazoo, and Bayard Holmes, Chicago.

Upon a rising vote the motion was declared unanimously carried.

Moved by Dr. Dunning, Ingham, that final action on this question be laid over until a year from now. Supported by Dr. Rogers, Jackson. The motion was lost.

Moved by Dr. Tibbals, Wayne, that the amendments to the By-Laws as submitted by the Special Committee on Medical Defense be adopted. Supported by several.

The following are the amendments as introduced at the first session of the House of Delegates, by Dr. Tibbals, Wayne, Chairman of the Committee on Medical Defense, and Delegate from Wayne County.

Chapter VII., Sec. 3, third line, after "funds," insert "except the Medico-Legal Fund."

Chapter VII., Sec. 4, line 10, after "Treasurer" insert "and the Chairman of the Medico-Legal Committee."

Chapter VIII., Sec. 6, line 27, amend to read, "It shall be the further duty of the Council to hold the official bond of the Treasurer and the Chairman of the Medico-Legal Committee for the faithful execution of their offices, annually to audit and authenticate their accounts." etc.

Chapter VIII., Sec. 6, last sentence, after "Treasurer," insert "or the Chairman of the Medico-Legal Committee."

Chapter IX., Sec. 1, add "A Medico-Legal Committee."

Chapter IX., add as subsequent sections:

Sec. 6. The Medico-Legal Committee shall consist of an Executive Board of five, to be elected by the Council, and also one member from each component society not otherwise represented, to be elected by the component societies. The Executive Board shall be elected for one, two,



three, four and five years respectively, and thereafter one member shall be elected each year to hold office for five years. All other members of the Committee shall be elected for one year.

The election of members of the Executive Board shall be made by the Council at the time of the annual session of the society, and that of other members of the committee shall be made by each component society at its first meeting after September 1, the term of office of all members of the Committee beginning on the first day of January following.

No County Society voting not to participate in the privileges of this bureau shall be entitled to representation on the Committee.

Sec. 7. The Council, at the same meeting, shall elect one of the five members of the Executive Board as Chairman, whose term of office shall be for one year from the first of January following. He shall act as Chairman of the Executive Board and of the entire Committee, and shall be the custodian of the Medico-Legal Fund. No disbursement shall be made from the Medico-Legal Fund without the signatures of the Chairman of the Executive Board and the Chairman of the Council or the Secretary of the State Society.

In order that the Chairman may be able to give the requisite amount of time to his duties, it is desirable that he should receive some compensation. The amount of his salary shall be fixed by the Council.

Sec. 8. The Executive Board shall report to the Council at its annual meeting, giving full particulars of the work of the Committee, and a detailed statement of income and disbursements.

It shall engage by the year a competent firm as general attorneys, and fix their compensation. Their duties shall be to compile from all available sources court decisions fixing the law of liability of physicians for civil malpractice, such compilations to be the property of the Society, and also to defend any member of the Society not in arrears, when sued or threatened with suit for civil malpractice, or to supervise such defense through a local attorney.

Sec. 9. The Medico-Legal Fund, consisting of an initial assessment of one and one-half dollars from each present and future member of the Society, and a subsequent assessment of one dollar for each year after the first, shall be collected by the State Secretary, and paid at least monthly as collected to the Chairman of the Medico-Legal Committee.

In the event that any County Society, by a majority vote of all its members, shall elect not to avail itself of the privileges of the Medico-Legal Fund, then this special assessment shall not be collected or accepted from any member of that component society and no member of such society shall be entitled to any of the privileges of the Medico-Legal Bureau.

Sec. 10. Members in arrears after June 1st shall not be entitled to defense for any suit, the cause of action of which arose while in arrears, and any member sued or threatened before joining the society or before the organization of the Medico-Legal Fund must pay the actual cost of defense in such suit.

Sec. 11. With the exception above noted, the Medico-Legal Committee shall undertake the defense of any member of the Society sued or threatened with suit for civil malpractice, regardless of the time when the alleged cause of action arose, and shall also defend any action for civil malpractice against the estate of a deceased member, provided he or she, while living, has conformed to the foregoing requirements.

Sec. 12. In the event that during any one year the demands upon the Medico-Legal Fund be large enough to exhaust it, the Council shall be authorized to loan sufficient funds from the treasury of the State Society to meet the contingency.

Sec. 13. It shall be the duty of any member of the Society threatened with action for civil malpractice to confer at once with the member of the Medico-Legal Committee from his component society and with his aid prepare the case and forward the same to the Chairman of the Medico-Legal Committee. He must agree not to settle or compromise his case without the consent of the Executive Board and the General Attorneys. He may recommend, in conjunction with the local member of the Medico-Legal Committee, the best available local attorney, but the authority to engage the services of local attorneys shall lie with the Executive Board and their General Attorneys. The local attorney chosen shall enter the appearance of his client and undertake his defense under the supervision of the General Attorneys.

Sec. 14. All attorneys' fees and court costs will be paid from the Medico-Legal Fund, and defense carried through all Michigan courts, but under no circumstances shall this fund be liable for any damages declared against an unsuccessful litigant.

Chapter XI, Sec. 1, first sentence, after "Societies" insert "exclusive of the special assessment for the Medico-Legal Fund."

The forgoing amendments to the By-Laws were adopted by a rising vote. Yeas, 27; nos, 2.

The House of Delegates then adjourned *sine die*.

B. R. SCHENCK,  
Secretary.

### Society in General Session.

The forty-fourth Annual Meeting of the Michigan State Medical Society was called to order in the Congregational Church, Kalamazoo, at 10:30 a. m., Wednesday, September 15th, by the President, A. I. Lawbaugh.

The meeting was opened by prayer by the Rev. Dr. Gelston.

We thank Thee, Our Father, that Thou has created for us a life that is intelligible, if we are patient and painstaking in ourselves. We thank Thee that though we are surrounded by mysteries that we do not understand yet we may hope for the development of human consciousness to correspond. We believe in Thee because our reasoning cannot come to any end without the assumption of an Infinite Mind, producing an order that is more and more yielding to the intelligence and inquiry of human experience. We thank Thee that Thou has created for us a system of normality and what seems to us abnormal is found to be but a contradiction of that which is lawful. Teach us more than we have yet learned of the way out, that brings us not only the joy and the power of this physical life, but that larger and completer felicity which belongs to the spiritual consciousness in a healthy and normal body.

We thank Thee for what Thou hast done in medical research, through human instrumentality, for the suppression of pestilence and disease, for the learning of science and all that belongs to nature. We thank Thee that this knowledge has accumulated from counsel Thou has given. We pray that Thou wilt direct the deliberations of this body and that our thoughts may be guided by Thy infinite wisdom, and above all give us to realize the fact which has characterized this profession at all times, that we are servants and toiling in

behalf of the suffering and the helpless. This is indeed the great inspiration of our lives, the compensation of our toil and the allurements of our attraction for time to come. We ask that Thou wilt bless the institutions that have been established by this profession for the benefit of humanity, and for the careful, painstaking investigation into the causes leading to results. And we pray so far as these, Thy servants, are going out into the world to administer the scientific knowledge so acquired, they may keep in touch with all new thought, with all larger and more inspirational movements leading to still higher results, that we may all realize that while the mysteries of life are full of bewilderment to those who do not understand them, they are full of compensation to those who will search out the reason of effects, and that our labor shall not be in vain but the time shall surely come when disease in all of its contagious forms shall be driven from the face of the earth, and when God Almighty's children shall learn that the way of happiness is the way of obedience and knowledge. We ask it in the name of the great Man of the ages who went about doing good, the great Physician of human bodies and souls. Amen.

In the absence of Hon. Frank H. Milham, Mayor of Kalamazoo, the Address of Welcome was given by Mr. W. L. Fitzgerald, city attorney.

The Address of Welcome on behalf of the Medical Profession was given by Dr. A. I. Noble, superintendent of the Michigan Asylum.

The report from the House of Delegates was read by State Secretary Schenck.

The Address of the President, Dr. A. I. Lawbaugh, Calumet, Subject, "The Physician, His Duties and Relations to the Profession and the Public," was read and elicited much applause.

Moved by Dr. Vaughan, Ann Arbor, that the President's Address be referred to the proper committee. Supported by Dr. Biddle, Detroit, and carried.

Under the head of miscellaneous business, Dr. Leartus Connor, Detroit, presented a paper entitled "Simple Refraction for Family Physicians; Its Promotion During 1908-09."

Moved by Dr. Burr, Flint, that the above paper be referred to the Business Committee.

Supported and carried.

Dr. C. B. Burr, Flint, offered the following resolution and moved its adoption.

*Resolved*, That the Michigan State Medical Society, in Annual Session at Kalamazoo, extends to Dr. Frederick A. Cook its heartiest congratulations on his dignified bearing in a trying situation.

*Resolved*, That nothing thus far printed or expressed which has come to the knowledge of the members of the Society, has impaired the confidence which Dr. Cook's utterances have inspired that he has attained a much coveted goal, or their faith that additional luster and honor will come to him as the details of his tremendous achievement are better made known to the public.

*Resolved*, That the Secretary be instructed to transmit to Dr. Cook a telegram embodying these resolutions.

The motion to adopt the above resolutions was supported and carried unanimously.

Dr. Biddle, Detroit, offered the following resolution:

*Resolved*, That the Michigan State Medical Society approves the action of the Michigan State Board of Registration in "requiring of applicants for license a demonstration of their fitness to do practical refraction" and congratulates the Board on being a leader in this movement for the simultaneous betterment of both profession and people.

Dr. Biddle moved the adoption of the above resolution. Carried.

Dr. Carstens suggested that in the future a special medical stenographer be employed for each section.

Dr. C. B. Burr, of Flint, and Dr. J. H. Carstens, of Detroit, were nominated for President.

There being some question as to the eligibility of Dr. Burr, on account of the fact that his term of office on the Council did not expire until September 16th, at his request, his name was withdrawn.

The general session then adjourned.

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At the evening session in the Congregational Church, Wednesday, September 15, 1909, the Address by the Guest of Honor, Dr. Archibald Church, Professor of Nervous and Mental Diseases, Northwestern University, Chicago, Subject—"Mind Cures in General and

the Emmanuel Movement in Particular," was well attended and on motion of Dr. Bulson, Jackson, a vote of thanks from the members of the Michigan State Medical Society was extended to Dr. Church for the very interesting address presented.

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The third session of the Society was called to order by President Lawbaugh in the Congregational Church, at 11:30 a. m., Wednesday, September 16th.

A report from the House of Delegates by Secretary Schenck was read.

Dr. Hirschman, Detroit, moved that we extend our hearty thanks to the Profession of Kalamazoo, both City and County, for their generous entertainment and the splendid arrangements made for the meeting.

Dr. Abrams, Dollar Bay, moved as an amendment, that we also extend a vote of thanks to the citizens of Kalamazoo who have contributed not a little to our entertainment; also to the Michigan State Telephone Company, who have placed their lines at the disposal of the members; also to the Upjohn Chemical Company, and particularly to the press.

Amendment accepted and motion as amended supported and carried.

Dr. Dubois, Grand Rapids, Chairman of the Committee on Nominations announced that Dr. John H. Carstens, Detroit, had been elected President for the ensuing year.

Dr. Carstens was declared elected and the President appointed Drs. Abrams and Ostrander to escort him to the Chair.

The President-Elect expressed his appreciation as follows:

"It is indeed an honor to have been elected as I have, unasked and unexpectedly, to the high honor of President, and I will truly do my best for the State Medical Society. I have always said that these honors are only honors when they come unexpectedly and unasked, and I have also said if you will tell me what the profession think of a particular doctor in his own town and in his own State, I will gauge him accordingly. This is because nobody can understand, appreciate or know the quality of a Doctor unless he is a medical man himself. When medical men think well of their colleague I know he must be all right. I therefore consider it an especially great



honor to have been elected to this office in my own State and by my own colleagues. For that reason I must again sincerely thank you and hope to have your co-operation in making the next meeting the largest and the most successful in scientific and other ways in the history of the Society."

There being no other business to come before the Society, on motion, the meeting adjourned *sine die*.

B. R. SCHENCK,  
*Secretary.*

### Report of the Council.

To the House of Delegates:

As material for this report is being assembled, the news comes to the Council of the sudden death of Dr. George W. Moran of Detroit, late Treasurer of the Michigan Medical Society. His death following a severe attack of pancreatitis was shockingly sudden and a severe blow to the many friends of this accomplished gentleman both in and out of the profession. He has been a painstaking, loyal and conscientious officer of the State Medical Society for many years and bore the highest standing in professional circles.

The vacancy in the office of Treasurer occurring through the death of Dr. Moran has been filled by the Council in the election of Dr. Willis S. Anderson of Detroit for the unexpired term.

Dr. George Dock, formerly Councilor from the First District, resigned September of last year because of change of residence to another State. To the members of this body as to any body of physicians anywhere extolling the merits of this illustrious member of the profession would be supererogatory. Suffice it to say that he brought to the Council the same clear insight and acumen that have distinguished him in his medical work always. The Council deeply regrets the loss to the profession of this State of this exemplar of the best in Medicine and wishes him the success sure to follow in his new field.

The vacancy occasioned by the resignation of Dr. Dock was filled by appointment by the President of Dr. L. J. Hirschman of Detroit.

#### *Membership.*

The membership of the society hereafter to

be treated in detail indicates that the organization is prosperous notwithstanding commercial depression prevalent during the last two years. The present membership of the society as given on the books of the State Secretary is 2,029. The paid membership for 1908 shows an immaterial falling off over that of the previous year, this condition being attributable beyond any doubt to commercial stringency. However in the last analysis it may not be considered an altogether flattering outlook when membership of the society, despite increasing population, shows decline. To be sure, this element enters into the reckoning, that higher medical standards may be slowly lowering the per capita proportion of physicians to population. It behooves each member of the society to give the matter of membership earnest and conscientious thought to the end that no physician of proper attainments and respectable standing shall be found in any other relation to the medical profession than that of active (and in the use of this word much may be implied) member of his county society.

The following extract from the report of the State Secretary to the Council presents the matter of membership in detail.

"*Membership.* A tabulation of the paid membership for 1908 shows that dues were received from 1883 as against 1892 in 1907 and 1873 in 1906. These figures represent the number paid by December 31st for the year stated. The total paid membership for 1907 was 1975, showing that 83 members did not pay 1907 dues until 1908.

"Comparing 1907 and 1908 up to December 31st, we find that Councilor districts No. one, three, five, six, seven, ten and eleven have gained, while districts No. two, four, eight, nine and twelve have lost.

"Taken by counties, the following are conspicuous:

"Macomb had but ten paid for 1908 against 22 in 1905. The number has been gradually getting less each year.

"Hillsdale had but nine paid members, as against 17 in 1906. A new secretary has been elected in Hillsdale and he writes me that he hopes to do something with the society.

"St. Joseph has 23 paid members against only nine last year—a good illustration of what new blood can do. I believe the Coun-

cilor of the district used his influence to elect a new secretary in St. Joseph.

"Ionia has made a good gain—about 40 per cent.

"Saginaw has made the poorest showing—reporting but 38 members against 59 for 1907—a loss of about 35 per cent.

"Grand Traverse, Mason and Tri show comparatively large losses.

"Marquette shows a falling off of 10 of the 38 members in 1907.

"As before stated, the loss of nine for the whole State may be considered fortunate considering the hard times. It is to be hoped the coming year will show a gain."

#### *Post-Graduate Study.*

Judging from the experience in certain of the Councilor districts, the interest in post graduate study is waning. This has been in at least one previous year a source of unification and of accretions to membership and the revivifying of the work should be attended with good results.

#### *Councilor District Meetings.*

Such meetings have been held during the year in the following districts: First, second, third, fifth, eighth, eleventh and twelfth. They have been as a rule successful, both from the viewpoint of medical work and social interest and it is the policy of the Council heretofore expressed to give to such meetings active encouragement and support.

#### *Time and Places of Meetings.*

Experience of previous years shows the very great importance of arranging for meetings of the State Society in the cities of large population and adequate hotel accommodations. Central location is also much to be desired. Where departure from this has been made, attendance at the annual meetings has been disappointing and a meeting attended by few (however high the quality) cannot be compared in its accomplishment with that at which large numbers are present. In church, in fraternity work, in public assemblies of every character, it is numbers that is of importance. People go where people go and enthusiasm is the logical and necessary accompaniment of a large representation in any gathering. In this connection, the report of the

State Secretary to the Council is of much interest.

"The annual meeting this year was a success in every way, except in respect to that without which no annual meeting can be a success. Attendance in large numbers is necessary to make a meeting of a democratic organization, like the State Society, a success; without a large attendance such a meeting must be counted a failure, despite the best of papers, the keenest of enthusiasm and the most genial hospitality. Many who attended the Manistee meeting spoke of it as the best they had ever attended; surely, there has been none in the experience of the present secretary, marked by better feeling, pervaded by greater enthusiasm or characterized by a spirit of more earnest work, yet there was lacking the one essential to success—a good attendance. Meeting as we do next year in Kalamazoo, we should have a registration which has not been equalled since the Detroit convention of 1903."

#### *Secretaries' Meeting.*

A meeting of the county secretaries was held at the Hotel Cadillac in September, 1908. There were present 30 county secretaries and six members of the Council. The state secretary reports added interest in the work on the part of those secretaries who attended the meeting. Their correspondence has been more promptly attended to and remittances for dues have been earlier made. He wisely suggests that in case the meeting of the State Society in the fall should prove successful, that a meeting of the county secretaries in the winter concurrent with that of the Council (the day before or the day after) should be held. Indeed the county secretaries at their meeting expressed themselves as favoring such a move.

#### *Medical Defense.*

At the meeting of the Council in January, a tentative plan for medical defense was adopted to be submitted to the House of Delegates for action during the present meeting. The most careful thought was given to this plan. In its construction, the experience of those best qualified for its outlining was freely used and the Council feels that a debt of gratitude is owing to Dr. Tibbals for the disinterested, conscientious and painstaking work which he

has brought to bear upon the solution of what is really a most important question. Naturally, individual opinions in the Council as to minor details were at slight variance, but the final output shows the best thought and is the result of mature deliberation. As to the detail of the appointment of the Medical Defense Committee, the Council feels this to be wholly immaterial. If the appointments can be better thought out in the smaller meetings as that of the Council, well and good. If on the other hand, it is the opinion of the House of Delegates that the committee should be constituted by vote of that body, also well and good. It is results that are required and as in all else, it is desirable that machinery looking to their attainment be as little complicated as possible. The above point may then be looked upon as an objection of a wholly non-serious character. That, however, which was raised by one of the County Societies to the basic principle of the organization, the compulsory feature, is one admittedly apt to develop divergent views. That this plan, however, offers the greatest good to the greatest number was the opinion of the Council after mature reflection upon the matter. It differs in no essential particular from the compulsory insurance, the sick benefit assurance and the provision for families in many factories, in marine hospital service of the United States and elsewhere. It has indeed more of the voluntary feature than the arbitrary deduction of a certain percentage of wages of employees in the interest of their medical and nursing care when ill, or provision for their families in case of death. The Council feels, however, that if there is more than a very small minority of the House of Delegates antagonistic to the plan, it should fail of adoption and be discarded. It may not be out of place to add that there can be no personal ends to serve in this matter on the part of any individual or organization within the State Society. Wayne County has a thoroughly well-oiled and adequate medical defense organization. Its suggestion to make this state wide is purely altruistic and no motive other than the good of the profession at large inspires those who have taken a lively interest in the late propaganda. The Council approves of the plan to be submitted by the Medical Defense Committee to the House of Delegates.

*Finances.*

The financial report of the secretary and treasurer to the Council is as follows:  
Receipts for 1908 were:

From dues .....	\$4,033.50
From advertising (gross) .....	1,786.53
From Misc. sources.....	16.00
Total .....	\$5,836.03

Disbursements:

Journal Expenses .....	\$4,226.98
State Society Expenses....	941.77
Total .....	\$5,168.75

Net profit for the year.....	\$ 667.28
Balance on hand January 1, 1908..	2,180.53

Balance in Treasury January 1, 1909 \$2,847.81

The following statement covers all transactions in detail from January 1, 1908, to January 1, 1909:

Cash in Treasurer's hands, January 1, 1908.....	\$2,180.53
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**Receipts.**

Dues .....	\$4,033.50
Advertising (gross).....	1,786.53
Miscellaneous .....	16.00
Total .....	5,836.03
	<hr/>
	\$8,016.56

**Disbursements.**

Journal:

Printing Journal .....	\$2,732.30
Mailing (addressing and wrapping) .....	42.00
Postage to Detroit mem- bers .....	100.20
Postage, second class.....	91.10
Salary, Editor.....	300.00
Salary, Associate Editor...	300.00
Mailing list.....	28.00
Advertising commission...	357.25
Postage .....	24.63
Office help .....	60.00
Env. for Journal (55.000)...	143.00
Printing, Stat., Office Sup- plies .....	5.15
Exchange .....	6.60
Newspaper Clippings.....	36.75
Total .....	\$4,226.98



State Society.

Manistee Meeting.....	\$ 78.50
Printing programs.....	12.00
Postage .....	24.62
Office help.....	60.00
Salary, Secretary.....	300.00
Exchange at bank.....	6.60
Telegraph, Telephone and Exp. ....	1.90
Printing, Stationery, Office supplies .....	19.30
Secretary of Council.....	50.00
Stenographer of Council...	50.00
Council Meeting, January, 1908 .....	21.00
Com. on Scientific Work...	7.50
Com. on Contract Practice.	2.00
Com. on Pat. Med. Evil....	15.00
Councilors' Expenses .....	112.75
Reorganization reprints....	15.00
Contract Prac., Cir. and Postage .....	29.80
Sec. of Council, Postage account .....	8.74
County Secretary's Meeting	96.64
Secretary's expense to County and State Meeting	30.42
Total .....	\$ 941.77
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Total Expenditures.....	\$5,168.75
Cash in Treasurer's hands	
January 1, 1909.....	2,847.81
	\$8,016.56

Journal.

The Journal of the State Medical Society has appeared with commendable regularity each month during the year. The Council feels not a little pride in the fact that so good a publication is issued to the profession monthly at an expense relatively small. The Journal makes no pretense to artistic design or embellishment but its typography is good, the paper on which it is printed is of excellent quality and its advertisements are clean and wholesome. Above all, its editorial and literary work are in no respect inferior to that of any other journal of the same class in the knowledge of the Council.

The Council desires to congratulate the Secretary-Editor and his associates upon their devoted labors and to thank them in this pub-

lic manner for the excellent service rendered to the Society during the past year.

The fololwing resolution is presented for your consideration:

*Resolved*, That the Council looks with extreme disfavor upon action on the part of any Medical Society contemplating the expulsion from membership because of consultation with or affiliation with some member of the profession legally qualified to practice medicine but not a member of a County Society.

It is sugested that a Committee of Eight be appointed by the House of Delegates to secure legislation making it a misdemeanor to use the term "certified milk" except by a regularly organized Medical Milk Commission.

All of the above is respectfully submitted,

For the Council,

C. B. BURR,  
Chairman.

Report of Committee on Legislation and Public Policy, and Michigan Member of the National Legislative Council.

Your Committee on Legislation and Public Policy regret to have to report the action of the last Legislature, in its relation to the practice of medicine, as unsatisfactory and harmful in its ultimate results and tendencies. The passage of a bill creating a Board of Optometrists and making this branch of medicine independent of the General Medical Practice Act appeals to the Committee as a most serious innovation. It is the beginning of a disintegration of the practice of medicine and should be combated with all the power of an united profession. A large body of men will be constantly seeking an easier and quicker way into the practice of a specialty and the precedent has been established. It is the feeling of the Committee that the gravity of this first step was not fully appreciated by the medical men of the State, else it would have had an united support in its effort to defeat this measure. In spite of an earnest appeal to the county societies and through them to the members of the Michigan State Medical Society, petition after petition was presented to the Legislature numerously signed by members of the society, asking for the passage of this act.

The Council of this Society had by its vote instructed the Committee to oppose this measure. Had the members respected the judgment of the Council there would have been no Optometry law. It is not the purpose of the Committee to complain, but to further impress the consequences of a divided profession.

A bill was also passed providing for the license of trained nurses by a Board appointed by the Governor and consisting of three nurses, one registered physician, and the secretary of the State Board of Health. This measure was opposed on the ground that the nurse is subordinate to the medical man who is the only competent judge of the qualifications for the practice of this art. Any act which makes the nurse independent of the medical profession, which this law in effect does, must be detrimental to all interests. That this is unwise legislation is freely asserted by those who have had an opportunity to observe its working out in those states in which some such law has been in operation long enough to be a demonstration.

There was no positive duty for the Committee and its negative or defeating work seems to have been ineffective. However, the Committee wish to express to the Secretary of the State Board of Registration in Medicine, for his energetic cooperation and support, its grateful appreciation.

The Chairman of this Committee as the Michigan member of the Committee on Medical Legislation of the American Medical Association, attended the annual conference on Medical Legislation held in Washington in January, and reported for this State.

The conference considered (a) the Navy Medical Reorganization Bill; (b) bills relating to the Public Health and Marine-Hospital Service; (c) measures relating to the Federal and State Regulation of the Public Health; (d) relief measures for the surviving families of persons who have died in the medical service of the country; (e) the uniform regulation of the practice of medicine by the different states; (f) uniform regulation of vital statistics by the states; (g) uniform state laws on foods and drugs; (h) the attitude of the last administration in appointing a commission for the purpose of reviewing and thus overruling certain findings of the governmental agencies lawfully established for the interpretation and enforcement of the National Pure Food and Drug Act, and (i) the general question of expert medical testimony.

An outline of the text, scope, and purpose of these measures and suggestions will be found in the report of the Committee on Medical Legislation made at the last meeting of the American Medical Association.

The work of the Association for Uniform Medical Practice Acts in the states is most important, well supplementing the effort being made by the American Confederation of Reciprocating, Examining, and Licensing Medical Boards, and must eventually bring about a national standard law with reciprocity between all the states.

A Pure Food Law drafted by the Committee on Model Law of the Association of National Food and Dairy Departments, was endorsed by the Council on Medical Legislation and ordered printed and distributed by the Committee on Legislation.

When this bill is introduced in the Michigan Legislature it should have the earnest and energetic support of this body to secure its passage unamended else one of the important purposes, a definite and uniform standard for all states, will be defeated.

W. H. SAWYER,  
*Chairman.*

#### Report of the Committee on Medical Defense.

One of the avowed purposes of this Society, as stated by its Constitution, is to federate and bring into one compact organization the entire medical profession of the State of Michigan, and to guard and foster their material interests. In full accordance with this avowed purpose, your Committee, appointed by order of the 1908 House of Delegates, submits its report upon Medical Defense.

We assume your familiarity with the general subject and epitomize our argument for the inauguration of this work by a simple statement of fact, i. e., that in all other states where an efficient plan has been long enough in force to justify rational deduction, it is clearly proven that this work is both feasible at small per capita expense and also of incalculable value in increasing the membership, in holding members in the Society, and in stimulating the prompt payment of dues.

By an efficient plan, we mean any plan which agrees to present the law in its application to the case of any member charged with civil malpractice, to the judge and jury, the one and only

tribunal whose province it is to fix his guilt or innocence, and no plan can be termed efficient which aims to do anything less than this.

Our plan contemplates the building up of a bureau of legal information in charge of competent attorneys, to which bureau any member of the Society shall have access in case of need.

We make this privilege retro-active, and also grant the aid of the Bureau after the death of a member, in order to extend its usefulness to the greatest possible degree.

We believe that this Bureau will be worth the full amount of his total society dues to every member, and that the addition of this feature will eventually result in a large increase of membership. We believe also that with closer union among an increased membership, the thoughtless word of criticism which incites malpractice suits will be less often spoken, and that an adequate presentation of the law before Michigan courts will result in an education of lawyer and layman as to the rights and liabilities of physicians under the law, whereby ultimately only the rare cases of seemingly apparent malpractice will appear upon the dockets.

The proposed plan is embodied in the following amendments to the By-Laws:

Chapter XII., Sec. 3, third line, after "funds", insert "except the Medico-Legal Fund." Chapter VII., Sec. 4, line 10, after "Treasurer" insert "and the Chairman of the Medico-Legal Committee." Chapter VIII., Sec. 6, line 27, amend to read "It shall be the further duty of the Council to hold the official bond of the Treasurer and the Chairman of the Medico-Legal Committee for the faithful execution of their offices, annually to audit and authenticate their accounts," etc. Chapter VII., Sec. 6, last sentence, after "Treasurer," insert "or the Chairman of the Medico-Legal Committee." Chapter IX., Sec. 1, add "A Medico-Legal Committee." Chapter IX., add as subsequent sections:

Chapter IX., Sec. 8. The Medico-Legal Committee shall consist of an Executive Board of five, to be elected by the Council, and also one member from each component society not otherwise represented, to be elected by the component societies. The Executive Board shall be elected for one, two, three, four and five years respectively, and thereafter one member shall be elected each year to hold office for five years. All other members of the Committee shall be elected for one year.

The election of members of the Executive Board shall be made by the Council at the time of the annual session of the Society, and that of other members of the Committee shall be made by each component society at its first meeting after September 1, the term of office of all members of the Committee beginning on the first day of January following. No Society voting not to participate in the privileges of this Bureau shall be entitled to representation on the Committee.

Sec. 7. The Council, at the same meeting, shall elect one of the five members of the Executive Board as Chairman, whose term of office shall be for one year from the first of January following. He shall act as Chairman of the Executive Board and of the entire Committee, and shall be the Custodian of the Medico-Legal Fund. No disbursement shall be made from the Medico-Legal Fund without the signatures of the Chairman of the Executive Board and the Chairman of the Council or the Secretary of the State Society.

In order that the Chairman may be able to give the requisite amount of time to his duties, it is desirable that he should receive some compensation. The amount of his salary shall be fixed by the Council.

Sec. 8. The Executive Board shall report to the Council at its annual meeting, giving full particulars of the work of the Committee, and a detailed statement of income and disbursements.

It shall engage by the year a competent firm as general attorneys, and fix their compensation. Their duties shall be to compile from all available sources court decisions fixing the law of liability of physicians for civil malpractice, such compilations to be the property of the Society, and also to defend any member of the Society not in arrears, when sued or threatened with suit for civil malpractice, or to supervise such defense through a local attorney.

Sec. 9. The Medico-Legal Fund, consisting of an initial assessment of one and one-half dollars from each present and future member of the Society, and a subsequent assessment of one dollar for each year after the first, shall be collected by the state secretary, and paid at least monthly, as collected, to the chairman of the Medico-Legal Committee.

In the event that any County Society, by a majority vote of all its members, shall elect not to avail itself of the privileges of the Medico-Legal Fund, then this special assessment shall not be collected or accepted from any member of



that component society and no member of such society shall be entitled to any of the privileges of the Medico-Legal Bureau.

Sec. 10. Members in arrears after June 1st, shall not be entitled to defense for any suit, the cause of action of which arose while in arrears, and any member sued or threatened before joining the society or before the organization of this Medico-Legal Fund must pay the actual cost of defense in such suit.

Sec. 11. With the exceptions above quoted, the Medico-Legal Committee shall undertake the defense of any member of the Society sued or threatened with suit for civil malpractice, regardless of the time when the alleged cause of action arose, and shall also defend any action for civil malpractice against the estate of a deceased member, provided he or she while living has conformed to the foregoing requirements.

Sec. 12. In the event that during any one year the demands upon the Medico-Legal Fund be large enough to exhaust it, the Council shall be authorized to loan sufficient funds from the treasury of the State Society to meet the contingency.

Sec. 13. It shall be the duty of any member of the Society threatened with action for civil malpractice to confer at once with the member of the Medico-Legal Committee from his component society and with his aid prepare the case and forward the same to the Chairman of the Medico-Legal Committee. He must agree not to settle or compromise his case without the consent of the Executive Board and the General Attorneys. He may recommend, in conjunction with the local member of the Medico-Legal Committee the best available local attorney, but the authority to engage the services of local attorneys shall lie with the Executive Board and their General Attorneys. The local attorney chosen shall enter the appearance of his client and undertake his defense under the supervision of the General Attorneys.

Sec. 14. All attorneys' fees and court costs will be paid from the Medico-Legal Fund, and defense carried through all Michigan courts, but under no circumstances shall this fund be liable for any damages declared against an unsuccessful litigant.

Chapter XI., Sec. 1, first sentence, after "Societies" insert "exclusive of the special assessment for the Medico-Legal Fund."

With a few minor changes, these amendments embody the plan recommended by the Council to

the members of the Society and their representative body, the House of Delegates.

An earnest endeavor has been made to inform all members regarding this work and to ascertain their wishes. So far as we are informed, unfavorable action has been taken in but one society, and the result of the postal card vote, so far as heard from, shows a very large majority in favor of the plan as proposed.

We strongly urge the inauguration of the proposed Medico-Legal Bureau.

Signed: F. B. TIBBALS, *Chairman*  
A. M. HUME,  
A. H. ROCKWELL,  
W. J. DuBOIS.

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#### Report of the Committee to Encourage the Systematic Examination of the Eyes and Ears of School Children Throughout the State.

To the President and Members of the House of Delegates of the Michigan State Medical Society:

Your committee appointed to encourage the systematic examination of the eyes and ears of school children throughout the State has the honor to make the following report:

Last year a circular letter was sent to the superintendent of school in cities with a population of 5,000 or more. It was determined that the eyes and ears of the scholars in nineteen cities were being examined more or less systematically. Because of lack of funds no letters were sent out this year, but from the increased number of letters received asking for instructions, etc., we know a distinct gain has been made.

Your committee had hoped to be able to make some recommendation regarding the advisability of having a law enacted requiring systematic examination to be made. Such laws exist in Massachusetts, Vermont, Connecticut and Rhode Island. We have been in communication with the authorities in the states named, but have not as yet received sufficient information to be able to report for or against the advisability of such legislation. The inquiry will be continued and we shall hope to be able to make a definite report at the next meeting of the Society.

The educational plan must be continued for the present. It is important that the examination

should be made by the teachers. Each city should have a physician who is willing to instruct the teachers and see that the examinations are made, but in all cases the superintendent of the schools should sign the Card of Warning which is sent to the parent or guardian of the scholar. If the examiners do the work themselves or refer the scholars to physicians, professional jealousies are certain to be aroused, and this misfortune more than any one thing, unless it be the apathy of the teachers, has retarded the progress of this important work.

The importance of these examinations is now generally known, but the workers are yet far too few.

As in all our previous reports your committee recommends the method of examination devised by Dr. Allport. Cards giving full directions can be obtained from The Peerless Optical Company, Heyworth Building, Chicago. Order "Visual Charts for Schools."

A sample card is included in this report.

Respectfully submitted,

WALTER R. PARKER,  
CHARLES H. BAKER.

### Report of the Committee on the Study and Prevention of Tuberculosis

The most important progress in the work against tuberculosis was the enactment by the Legislature of 1909 of a bill designed in an administrative way to control tuberculosis in the State of Michigan. The preparation and passage of this bill was the result of the combined work of the members of the State Board of Health, the Board of Councilors of this Society, the members of the Committee on Legislation and the Committee on Tuberculosis. The Michigan Tuberculosis law contains essentially the good points of the laws passed in the states of New York and Wisconsin, but modified and improved and adapted to the needs of our State. It provides for compulsory notification of open and closed forms of tuberculosis for statistical purposes. The records of reports are open for inspection only to the health authorities. It provides further for free examination of sputum and compulsory disinfection of premises, penalty for the careless consumptive and also penalty for the physician who fails to report a case of tuberculosis or who makes false reports. Furthermore, upon recov-

ery of a patient the health authorities must be notified by the physician.

Your committee assisted materially in the organization of the Michigan Association for the Prevention and Relief of Tuberculosis. This Association is an auxiliary to the National Association. It has established some fifty local branches throughout the state, its object being educational and to interest the laity in the crusade. In evidence of its effectiveness the Michigan State Federation of Women's Clubs in session at Traverse City passed the following resolution: "Resolved, that we earnestly recommend that each club in the Federation renew its efforts to help stamp out that dread disease tuberculosis."

Your committee co-operated in securing additional appropriation for the State Sanatorium which you recollect was established in 1905 in response to a petition of this Society.

The Sanatorium located at Howell will soon have accommodation for one hundred patients. It is intended for incipient cases only and especially for those reduced in finance. It may be arranged to have the county from whence the patients come, pay the charge of seven dollars per week. As institutional segregation is now considered the most effective method for the prevention and cure of tuberculosis, this institution should commend itself to the members.

Members of your Committee assisted in the formation of an Association for the Prevention and Cure of Contagious and Infectious Diseases in the Upper Peninsula. Its membership consists of appointed delegates from the board of supervisors, the county physician and health officers. The object is to provide proper provision for indigents afflicted with tuberculosis or other contagious diseases at the expense of the county, or associations of counties.

H. J. HARTZ, *Chairman.*

### News

The American Medical Association has appropriated the sum of \$5,000 for the purpose of creating a suitable memorial to Dr. N. S. Davis, the founder of the Association, provided that within three years an additional amount of \$20,000 be collected for this purpose, and provided also that the form of the memorial be approved by the House of Delegates of the Association.

Dr. R. T. Fuller of Grand Ledge has accepted the position of Dean of Flint Medical College, New Orleans, and left for that city on September 20th.

Dr. E. W. Haass, who has been taking work in the clinic of Professor Fraenkel at the Charite, in Berlin, returned to Detroit early this month.

"Doctor" A. D. Havens, of Sault Ste. Marie, late of Kalamazoo, was convicted in the Circuit Court of practicing medicine without a license and was fined \$40 and \$10 costs. He held himself out as an "eye specialist" and "optometrist." Since his conviction he has left the Soo for parts unknown.

Dr. Julius A. Post of Lansing, has been appointed United States Pension Examiner to succeed the late Dr. Elmer North. The pension board as now constituted consists of Dr. George E. Ranney, president; Dr. J. H. Wellings, secretary, and Dr. Post.

Dr. C. B. Burr of Flint and Dr. C. W. Hitchcock of Detroit, sailed on October 9th for Europe. They will attend the annual six weeks' clinic on psychiatry, given by Kraepelin, at Munich.

Dr. C. C. Slemons of Grand Rapids, City Bacteriologist, returned home recently from a two weeks trip, during which time he visited various city laboratories in the East.

Butterworth Hospital, Grand Rapids, opened its free dispensary on the 8th of October. The following is the newly appointed Out-Patient Department Staff: Medical—Drs. Collins H. Johnston, Eugene Boise, J. A. McColl, C. E. Koon, B. R. Corbus, Wm. Northrup, J. D. Campbell, T. M. Koon, J. B. Hilliker, J. B. Whinery. Surgical—Drs. G. L. McBride, Ralph Apted, R. Webb, J. D. Hastie, R. R. Smith, A. M. Campbell, R. J. Hutchinson, E. P. Billings, H. Dingman, M. E. Smith, F. C. Warnshuis, R. H. Spencer. Eye, Ear, Nose and Throat—Drs. Roller, Kirkland and De-Kraker. Dermatologist—Dr. C. E. Hooker. Chemist and Bacteriologist—The House Staff of Internes. A large reception room and four clinic rooms have been newly decorated and furnished for this work. The hours from 12 to 2 p. m. have been designated for this service, and should the work demand it, these hours will be lengthened. There will be two members of each division of the staff in attendance every day. Thus

far the dispensary has been opened to the public for only two weeks and 27 patients have presented themselves for treatment and advice. The hospital authorities feel that there has long been a want in this city for this dispensary service and feel greatly encouraged over the successful manner in which the work is commencing.

St. Mary's hospital, Grand Rapids, held its annual Tag Day on September 25th. This netted them some \$4,500 which will go towards equipping its new hospital building that is being built. This building will be completed by June 1st at a cost of \$70,000. It will be four stories high, of brick construction, fire-proof and modern in all its details.

At a banquet of the Michigan Alumni of the Medical School of Northwestern University, given at the Rickman Hotel in Kalamazoo, September 14th, a permanent Michigan Alumni association was formed with about 30 members. Four local physicians and eleven of the alumni from other cities in Michigan were present. Dr. A. R. Edwards, Dean of the Medical Department, was present as the honored guest of the occasion. Following the banquet Dean Edwards addressed the members of the alumni present. He spoke with reference to the development of the school, what had been done and what it was hoped to accomplish in the future. The following were present: Drs. Shackleton, Balch, Boys, McNair, Kalamazoo; Dr. Holm, Lansing; Dr. Sherman, Detroit; Dr. Quick, Atlantic Mine; Dr. Garland, Buchanan; Dr. Snowden, Galien. Dr. Kensie, Three Rivers; Dr. Bulson, Jackson; Dr. Rogers, Jackson; Dr. Schultz, Coldwater; Dr. Vaugh, Covert, and Dr. Colman, Mattawan. The Michigan Alumni association of the Medical Department of the Northwestern University was formed.

The amount collected on Blue Star Day in Detroit has been announced as \$14,240.

Dr. V. L. Garbutt of Detroit has removed from 72 Washington avenue to 21 Charlotte avenue.

Drs. O. H. Lau, C. S. Oakman, W. A. Spitzley and A. W. Imrie, all of Detroit, have returned from abroad. While away they attended the meeting of the International Congress.

The annual session of the Detroit College



of Medicine opened September 22nd.

There is considerable agitation at present in Grand Rapids for the abandonment of the present ambulance service as conducted by the Police Department. The plan proposed is to district the city and assign a district to each hospital which will conduct its own ambulance service and make all the runs in its own district. The matter is at present in the hands of a committee of the Police and Fire Commissioners.

The Butterworth Hospital Training School held its annual graduation exercises on September 27th, when it graduated a class of 14 nurses. The addresses of the evening were made by Hon. T. J. O'Brien, United States Ambassador to Japan, and by the Superintendent of Public Schools, W. H. Elson. Several of the members of the graduating class have already received appointments in various hospitals and will do institutional work.

Grand Rapids Personals: Dr. T. C. Irwin has removed from the Majestic to the Ashland building. Dr. Frances Rutherford attended the Hudson-Fulton celebration in New York. Dr. E. W. Bernstein of Kalamazoo has opened offices in the Pontiac building and will divide his time between Grand Rapids and Kalamazoo. Dr. W. H. Kassabien of Coopersville will be in Grand Rapids on certain days, having opened an office over West's drug store.

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## Marriages

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Donald Ross McIntyre, M. D., Gwinn, Mich., to Miss Caroline Merritt King of Milwaukee August 3d.

Loiza Elwell, M. D., Battle Creek, Mich., and Philip Johnstone, of Belfast, Ireland, at Detroit, July 31st.

H. N. Torrey, M. D., and Miss Nell Ford, both of Detroit, at Detroit, September 15th, 1909.

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## Deaths

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Dr. Charles M. Snyder, of Lake Odessa, died at his home, September 5th, from pernicious

anemia, aged 58 years.

Dr. Richard M. Johnson, a graduate of Ann Arbor in the class of 1871, died at his home in Northville, September 9th, aged 66 years. Death resulted from uremia.

Dr. Charles T. Wilbur, for many years a member of the Kalamazoo Academy of Medicine and of the Michigan State Medical Society, died at Kalamazoo, August 19th, from cerebral embolism, aged 74 years. Dr. Wilbur was a graduate of the Berkshire Medical College, Pittsfield, Mass., in the class of 1860. During the Civil War, he was assistant surgeon and surgeon of the 59th and 95th Ohio Volunteer Infantry. After the war, he engaged in general practice, giving much of his attention to nervous and mental diseases. From 1876 to 1884, he was superintendent of the Illinois State Institution for the Feeble-Minded, at Lincoln, and later opened a private retreat for the feeble-minded at Kalamazoo. He was a trustee of the Michigan Home for Feeble-Minded and Epileptics at Lapeer.

Dr. Elmer D. North, Detroit Medical College, 1881, a veteran of the Civil War, and at one time superintendent of schools in Ingham County, died from angina pectoris, August 17th, aged 68 years.

Dr. George Reid, a member of the Tuscola County Society, State Society and American Medical Association, died recently at his home in Reese, where he had practiced for 36 years.

Dr. Byron S. Knapp, for fifteen years a member of the Owosso Board of Education, died in that city on August 20th, aged 64 years. Dr. Knapp was a graduate of the Cincinnati College of Medicine and Surgery, in the class of 1874.

Dr. Casper K. La Huis, formerly of Kalamazoo, later of Zeeland, died at his home from tuberculosis, aged 40 years. Dr. La Huis was a well known member of the Kalamazoo Academy of Medicine and of the State Society. He graduated from Ann Arbor in 1896, and was afterwards assistant in gynecology and obstetrics for several years.

Dr. Charles T. Newkirk, a member of the Bay County Medical Society, died suddenly while at home, on September 16th. Dr. Newkirk had an eventful career. He was born in St. Williams, Canada, in 1841, taught school at 14 to get money to educate himself, studied medicine with Hon. John Rolph and later attended the University of Toronto, Victoria College. He graduated at 21.

and after a short practice in Canada moved to South America, where he learned Spanish and became governor-director of a province and later doctor to the Argentine hospital. He spent three years as surgeon in the Brazilian army, and after a visit back at his old home, settled to a quiet practice in Assumption, Paraguay. There he passed through several epidemics of smallpox, yellow fever and cholera. Dr. Newkirk located in Bay City 30 years ago and gained a large practice. As a master of four languages, he served the government in a number of incidents involving South American relations. When the Spanish war broke out he went with the Thirty-third Michigan, and served with distinction. Afterwards he was made major of the hospital corps, a member of the pension board and a U. S. examiner for recruits.

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Dr. Wesley Erwin, of Bay City, died suddenly at Grand Lake, August 13th, from heart disease. In 1870, Dr. Erwin graduated from the Bellevue Medical College. He was a member of the American Medical Association and the American Academy of Medicine; was prominent among the veterans of the Civil War; was a member of the Bay City Health Board.

The following resolutions were adopted by the Bay County Medical Society:

Death has taken from us one of the most loved, ablest and honored members of this Society—Dr. Robert W. Erwin—who died after a few hours' illness, August 13th, 1909.

It was a great shock to all, and to those who had known him most intimately during the long years of his residence in this city, it is a personal bereavement and sorrow.

His many acts of kindness and thoughtfulness when called to our homes while sickness and death were afflicting us, will never be forgotten. His uniform courtesy to his professional brothers, his unselfish advice, staunch support and assistance were ever ready and cheerfully given from his rich store of knowledge and experience. There are few of us who have not profited by it.

As a token of our appreciation of his pure life and character, we adopt the following resolutions:

*Resolved*, That in the death of Dr. Robert W. Erwin, this community and the medical profession has lost an able, talented and conscientious physician, and a man and citizen of perfect honor and integrity.

Dr. George Howell, of Tecumseh, died September 14th, 1909, at his home, after two years of failing health. He was born in 1836, in Macon Township, Lenawee County, into the home of a pioneer doctor where there were few luxuries, but plenty of hard work and privations. Dr. Howell grew up on a farm, meeting the life of a pioneer's boy, but somehow getting inspiration for an education and for a most unselfish life. The district school, Tecumseh High School and Hillsdale College gave him his academic instruction. In 1860, he entered the Medical Department of the University of Michigan, graduating in 1863. With an abundance of the highest grade recommendations he confidently expected an appointment in the army. For some reason which Dr. Howell never could discover, our great war governor, Blair, unceremoniously refused him an appointment, a disappointment that the doctor never ceased to regret.

For some 20 years he practiced in the country where he was born, coming to Tecumseh in 1884, where he soon acquired a large practice. Three terms he represented his district in the lower house, and one term in the upper house of the Michigan Legislature. For 15 years he was President of the Tecumseh Board of Education, and one year he was President of the village.

In all philanthropic enterprises he was deeply interested, and his own private benefactions will never be known 'till the books of eternity are opened. A few of his good deeds occasionally come to light, just enough to hint at the many that were hidden by his own modesty. His devotion to his patrons was remarkable and bordered on the heroic. A doctor of "the old school," he never attempted a specialty, but patiently and unselfishly served rich and poor alike. Yet his professional brothers who met him in counsel found a well disciplined mind, and a large fund of available common-sense knowledge, added to his many years of careful medical reading.

Two years ago failing strength compelled him to relinquish active practice, since which time most of his days were spent on his farm, the earnings of his youthful professional life, where on September 14th, he quietly and without pain passed away.

In 1864 he married Miss Ann A. Remington, with whom he lived most happily for 44 years, her death in 1908 seeming to decidedly hasten his passage to the grave. He leaves three married daughters with six grandchildren.

Dr. George W. Moran, Treasurer of the State Society since its reorganization, died suddenly on August 12th. Dr. Moran was born in Morgantown, Va., in 1868. He received his literary degree at the Ohio State University and his medical degree at the University of Michigan, in 1892. He began practice in Detroit with Dr. C. G. Jennings, later having his office on Jefferson avenue. In 1895, he married Miss Minnie Hasbrouck, of Marshall. Dr. Moran's activities were many, he being Chief of the Medical Staff of St. Vincent's Asylum and a member of many medical societies and clubs.

One knowing Dr. George Moran casually or superficially might fail to appreciate him, perhaps even dislike him, but to know him intimately was to love him.

He himself was a man of strong likes and stronger dislikes, who had no hesitation in expressing his approval or disapproval forcibly regarding anybody and everything, a policy generally not conducive to popularity. Diplomacy was foreign to his nature in his social relations, although in the relation of physician and patient, he was gentle, considerate and tactful in the highest degree. He was an excellent practitioner, careful in diagnosis, skilled in treatment. His families and patients were his personal care, their troubles and responsibilities his, and he was closer to the hearts of his clientele than many often get in this commercial age.

Much of his work was among children whom he seemed to love and understand intuitively. He was fond of nature and of outdoor sports, never tiring of the boat, the rod, the reel and the bait-can, whether the sky was blue or overcast with clouds. Then all gruffness of exterior faded away, all cares were laid aside, and the true man appeared. Kind and gentle, loyal and true to the highest and best in life.

The following resolutions on the death of Dr. Moran were adopted by the State Society at the Forty-fourth Annual Meeting:

WHEREAS, It has pleased Almighty God to remove from the ranks of our society, Dr. George W. Moran, a faithful and consistent officer and member, and an eminent practitioner of our art.

Therefore, be it Resolved, That in the death of Dr. Moran, the Michigan State Medical Society has sustained an irreparable loss and that the sympathy of this organization be and is hereby extended to his family and friends.

Be it further Resolved, That these resolutions be spread upon the minutes of this society and a copy of the same be transmitted to the family of the deceased.

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## Correspondence.

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BUDAPEST, HUNGARY, Sept. 4, 1909.

To the Michigan State Medical Journal—

The Sixteenth International Congress, convening in this city from Aug. 28 to Sept. 4, is now ended, and a brief retrospect may be of interest to you.

First of all, a few words as to the city, which is somewhat off the line of usual European tours. Not so very many years ago Buda and Pest, lying on opposite shores of the Danube River, were separate and rival cities; but after uniting in one municipality they buried rivalry, merged their names, built three magnificent bridges across the river, and flourished mightily, so that at present the population is over 800,000. The Buda side is made picturesque by two rugged hills rising abruptly from the shore, one crowned by a royal castle, and the other crested by a fortress, and merging with the city by terraced slopes, relieved by the striking monument and pergola to St. Gerhard.

The Pest side is quite level, but presents an esplanade or "Corso" along the shore, where none but pedestrians are allowed, and where on Sunday afternoon one sees a vast promenade of the Hungarian populace of all classes. The Pest side is the larger of the combined cities, and it is here that the great business, political and social centers are located, and where the Congress has met. It is a comparatively modern community, with fine buildings devoted to government, education, art, science, and business, not to forget hotels and restaurants, which in these countries are seldom large but always numerous. To the majority of visitors it seems very foreign, because the language is absolutely strange, even the signs on the streets and stores and everywhere being in Hungarian. The language is of Hunnic origin and quite unrelated to any tongue studied by the ordinary linguist. The people are intensely jealous of their language and patriotic for Hungary; they are said to relish neither the German tongue nor the Austrian dominion forced upon





George W. Moran, M. D.



them by their union with the Austrian empire. However, all the educated classes, as well as nearly all public servants and storekeepers, speak German. Indeed, they are apt to know several languages, for their own is rarely known to visiting foreigners.

Our arrival in Budapest was marked by a babel at the depot, for every train brought crowds of people, and the excitable Hungarian temperament, ignited by the impatience of tired travelers, produced a confusion of sound and movement that was memorable, but indescribable. The Hungarian cabman is one of the most reckless and fiery in all Europe. Many of them understand several languages. We were astonished one day to have our driver converse with us fluently in English; he had worked in New York for three years! Added to the confusion of arrival at night, it was intensely hot, but our hotel, the "Royal Hungaria," brought us cooling breezes, for it fronts upon the Corso, overlooking the Danube at its most picturesque point. I was lucky enough to have a fine room with this outlook, and as a glorious moon stood above the opposite hills, the effect was such as never can be forgotten. The Congress has brought the largest attendance in its history—it is reported to be over 5,000; preparations have been in progress for many months and the details of an international meeting far exceed a simple national convention. For instance, the one consideration of polyglottism requires that every official piece of printing be in four languages—Hungarian, German, French and English. Also, every office—central, information, distribution, secretary's, treasurer's, etc., must have capable linguists in attendance. For here one rubs shoulders with people of all nations—not only the four named above, which are in the majority—but also Italian, Spaniard, Portuguese, Dutchman, Dane, Swede, Russian, Greek, Bulgarian, Roumanian, Bosnian, Servian, Swiss, Turk, Persian, Japanese, Siamese, Egyptian, and representatives from South American countries. But everybody can get along by means of one or more of the three great modern languages—German, French and English—and greatest of these at this meeting is German. Yet the lack of one universal modern language is emphasized by the use of Latin on the beautiful bronze medal badge given to each member; this medal represents Aesculapius on one side and the Hungarian House of Parliament on the other. The increasing desire for a suc-

cessor to Latin is manifested by the pamphlets given away in the cause of the "Lingua Internationala," a modified Esperanto, which really appears very sensible, and certainly easy to read.

I registered as a participant in the Congress on Sunday morning, the 29th of August. Many had registered in advance and found waiting for them preliminary reprints of papers to be read in their section, as well as invitations to certain functions, and the enrollment of their names on a membership list. We others, who had overestimated Continental rapidity, had to struggle for reprints, received our invitations a day or two "post facto," and saw neither our own nor our friends' names listed; this failure to print in the daily bulletin a list of new Congressists made it almost impossible to ascertain who was present or where any one was stopping. As it was, however, I was presented with reams of printed matter, from one-page circulars to 400-page bound volumes, making a bundle that I was obliged to send to the hotel by express. Subsequent examination showed these to be mostly advertising matter, regarding various Hungarian Sanitaria, baths and other institutions; there were also souvenir books of the city, and the usual descriptive matter concerning the Congress—programs, both scientific and social, organization, delegations, list of pre-registered members, plan of the buildings, etc. The convention was held in the buildings of a Polytechnical School, on one of the chief down-town streets. This afforded separate auditoria for all sections, in a comparatively small area, easily accessible to one another. This seemed an admirable provision, and the arrangements made for the convenience and comprehension of all visitors appeared excellent. As the machinery of the Congress was set in motion, however, the execution of the plans proved inferior to the conception, for one heard on many sides complaints regarding certain details which with us seldom cause trouble. This may be ungracious on the part of a visitor and guest, especially in view of the cordial hospitality extended to every one, but certainly I heard similar comments from many English-speaking people.

I will not dwell on any of the scientific part of the Congress, as the programs are too enormous, and the sections too numerous; there were 21 announced—(and a new section was formed for orthopedics)—with a total schedule of about 1,500 communications to be read! The volume of heterogeneous medical information of-



ferred at such a Congress is astounding, and defies all efforts at even computing it. It is possible only to gain general impressions, and to glean a few helpful ideas here and there. I endeavored to visit numerous sections during the week, to see and hear numerous men of renown. This was difficult, for the schedule was very indefinite and one seldom knew when any given paper would be read. Moreover, many of us had to confess that comprehension was greatly impeded by several factors, such as the foreign tongues, the failure of the chair to preserve quiet, the atrocious ventilation of nearly every room, and the indifferent delivery which seems to be characteristic of medical men the world over.

To me the Frenchmen were the most interesting of the European speakers; the Germans were inclined to be didactic and cumbersome, while the Hungarians, though often brilliant, had sometimes a peculiar accent to their German that made it slightly difficult to understand.

There was nothing epoch-making in the papers presented; much was good, even of high order, but again there was much of the commonplace, not to say inferior. The papers presented in English were comparatively few and not of such a high average as one might wish. The absence of really great American names was indeed disturbing. Some of them ventured discussions, but the weight of language was so overwhelmingly Teutonic that English speakers seemed to make little impression.

Among the Americans I saw were J. H. Musser, George Dock, Harvey Cushing, J. B. Murphy, A. D. Bevan, R. Matas, R. W. Lovett, A. MacPhedran, E. W. Andrews, C. W. Richardson. Of Detroit, Dr. W. A. Spitzley was with me, and I met Dr. W. A. Potter and Dr. J. D. Matthews.

One conspicuous feature of our own national meetings has been wanting here—namely, the scientific exhibits and the commercial exhibits. Nothing of the kind is seen here, except an occasional specimen, instrument or photograph demonstrated at the reading of a paper.

The longest programs and the largest attendance were at the sections on Internal Medicine and on Surgery. At first a casual visit to these sections was unsatisfactory, because the speaker's name was not written on the board and the chairman did not announce so that the audience could hear, but continued protests finally brought about an improved system. By far the largest

crowds were found at the combined section meetings on Immunity, Aug. 31 and Sept. 1 and on Appendicitis, Sept. 2 and 3. The latter symposium brought out a discussion of points which American surgeons have practically ceased to discuss for several years. Broadly speaking, European surgery is inferior to ours in technique; their eternal work is in pathology and diagnosis. We saw this illustrated, not only at the Congress, but in actual work at clinics.

Perhaps the most interesting part of the whole week to a novice has been the various social functions and entertainments arranged by the Hungarian physicians, city and state authorities, and private institutions.

The first event was a preliminary soiree on Saturday evening, the 28th, in the Gallery of Fine Arts. The inauguration ceremony took place in the Municipal Redoubt on Sunday at 11 a. m., in a vast and gorgeous hall, whose wonderful chandeliers, with over 1500 electric lights, lent splendor to the pomp of the occasion, for a scion of royalty, the Archduke Joseph, governor of Hungary, opened the meeting, and all delegates, both official and general, appeared in the full dress of their respective countries, while Hungarian soldiery, brightly uniformed, were everywhere in evidence. At this meeting the mayor of Budapest also extended a welcome, and the president of the Congress then called upon the authorized delegate of each country. The audience at this ceremony was constantly changing, lending a kaleidoscopic appearance, but also preventing the speakers from being well heard. Yet the occasion was dignified and very impressive to a citizen of democratic training. Very thrilling was the national hymn sung by a large chorus of native male voices.

On Monday afternoon many Americans attended a gracious function around the statue of Washington in the City Park, which was erected by Hungarians in the United States as an ideal of liberty and citizenship. Brief addresses were made, then American and Hungarian national airs were sung by a body of children who had been born in the States.

Monday evening the city gave a soiree, in the Municipal Building, and this again was on a grand scale; the beautiful costumes of the ladies mingling with the brilliant continental uniforms of dignitaries and officers produced a dazzling effect. A fine musical program was given, and refreshments, with a plentiful supply of champagne, which flows freely in this country.

Wednesday evening a reception was given at the Royal Castle by Archduke Joseph; the same splendor was repeated, with the added sanctity of imperial surroundings, and an opportunity to look down by moonlight over majestic terraces upon the Danube and across upon the glittering expanse of Pest.

Thursday evening the presidents of sections gave individual dinners to delegates and essayists. Besides these official functions there were visits arranged to various points of interest, such as the Apenta Spring, the waterworks, champagne factories, St. Margaret's Island and Baths, theater performances, museums, parks, and government buildings. In many of these entertainments the ladies were included, and in addition there were drives, excursions, and functions expressly for the ladies.

The weather during all the week was good, except for one rainy morning, when the heat of the preceding three days gave way to a delightful coolness that prevailed the rest of the time. The last two days saw a rapid exodus of visitors, many of whom expressed the opinion that a week was too much time to devote to the Congress.

Whatever may be the individual opinions as to merits of the meetings, one fact is undisputed—namely, that the International Medical Congress is a great factor for increasing the mutual respect of the nations, and for uniting the medical profession of the world in the bonds of common knowledge and brotherhood. Attendance at such a convention is inspiring and stimulating. The next one in London, three years hence, ought to be the occasion for the English-speaking people to make a mighty impress upon the mould of medical progress. I hope Michigan will send not only visitors but delegates and essayists.

Yours truly,

CARL S. OAKMAN.

serious illness of my daughter in 1904 I first learned to know the value of a trained nurse, and although I had the best medical attendance, my daughter's life at that time could not have been saved without the nurse. It was a case of teamwork that neither doctor nor nurse could have accomplished alone. During 1904-5 a trained nurse was always a member of my household, and at the same time my family physician became my social companion and close friend. I have, therefore, the highest respect, not only for the profession of nursing, its nobleness and necessity, but also for the medical profession.

Through these associations I learned much of the nursing profession and the organization, working and aims of the hospitals. In 1907 and again in 1909 I gave my best endeavors to secure legal recognition for the nurse who has spent her time, her strength and her best efforts to qualify for the practice of her profession. Whatever I have done has been entirely without fee or reward of any kind.

I never have nor do I now see why the medical profession, or any part of it, should oppose the trained nurses in the passage of the Nurses' Act, the sole aim of which has been to elevate and improve the profession of nursing and make it more valuable and efficient to the medical man and through him to the general public. It does no injustice to the so-called practical nurse and does not prevent her from following her calling. The new law does not intrude on the physician's practice, his prerogatives or his profession. It simply provides a method by which the public and the doctor can determine who is a trained nurse and what that appellation means, viz: two years' training in a recognized and reputable training school.

The opposition to the nurses claimed that hospitals were organized and conducted by physicians and that physicians trained the nurses; that there were scores of hospitals in Michigan having a 50-bed capacity, where the doctor was supreme in the training school. The nurses proved conclusively that there were not scores of hospitals in Michigan having a 50-bed capacity; that hospitals like Harper of Detroit, U. B. A. and Butterworth of Grand Rapids and most of the principal hospitals in other parts of the State are not organized or conducted by physicians, but by governing boards of citizens, not doctors; that the nurses' training schools in these hospitals are officered and administered by nurses; that the curriculum of their training schools is deter-

Grand Rapids, Mich., September 10, 1909.  
To the Editor:

I desire to make a rejoinder to the "Notes on Recent Legislation" published in the July, 1909, JOURNAL, on pages 339 and 340, in so far as it regards the Nurses' Registration Act.

Before taking up the question I would say that I am a layman and not connected with either the nursing or medical profession. During the very

mined by nurses, and that the text books used in the training schools are written by nurses; not only that, but the superintendent, supervisor and dietician of the training schools are nurses; that the lectures which the doctors give to the nurses comprise less than five per cent of the nurses' training; that the art of nursing and over ninety-five per cent of the training is taught by nurses. There are, of course, exceptions to these conditions, but I believe that the large majority of the hospitals and training schools in Michigan fit the specifications I have noted above.

The article in the July JOURNAL intimates that unfair methods were practiced in passing the bill through the Legislature, and that its final passage was accomplished through repeated efforts of the Governor. I deny all of this and can speak with assurance because I was in close touch with the nurses' campaign every day. No lobbying was done on the floor of either house; no committee hearings were attended in either Senate or House that were not announced and determined upon by the proper chairmen a week in advance, and the character and attendance of the meetings in both cases were determined by the proper legislators. So far as I know the Governor made absolutely no efforts in behalf of the Nurses' Bill, and I have heard of no utterance from him until after the bill was passed by both House and Senate. He then said he would be very glad to sign the act and make it law, and in saying so congratulated the nurses on their deserved recognition.

The published statement of the late Representative Colby is very weak. He certifies that he was present during the reading of the bill and desired to make some changes in the interest of the people, but was dissuaded from doing so by the chairman of the Committee on Public Health. It seems odd that such a deathbed statement should be brought forward at this time, when we all remember that Sheridan J. Colby was a fearless, brave and competent legislator at the time the Nurses' Bill was under consideration by the House.

In nearly every other State of the Union where there is a registration of nurses, the nurses control their own board, and it seems to me that they are as competent to manage their own affairs as the pharmacist, who controls his own board of registration. Like the pharmacist, the nurses must follow exactly and implicitly the doctors' orders and wishes, and this is a very important part of her training in all reputable

training schools. She is impressed over and over from day to day that her success and usefulness depend upon her loyalty and obedience to the physician she serves under.

I wish to say a word regarding the two years' course of training, which was cut down from three years. A large number of the nurses desired to have the minimum course three years, but it was remembered that a majority of the training schools in Michigan, including some of the State institutions, had only a two years', or at the most a two and one-half years' course; the friends of the proposed act realized that it would be better to build up than to start by shutting out a majority of the Michigan training schools.

No additional State expense is involved in this forward step in nursing. The new act does not appropriate any money from the public treasury, and experience in nearly twenty other States shows that similar laws have increased the wages of the nurse.

It seems to me that the medical people should be the first to welcome the advent of the new law, help the nurses get whatever further legislation they may desire and use their utmost influence for public and professional recognition of the registered nurse. I am urging that the medical profession of Michigan recognize that the trained nurses of the State are just as loyal to the doctor and his profession as ever before and they hope to make themselves more helpful through the new act. The new law will undoubtedly elevate their work, strengthen and improve their schools, benefit the public and, finally and most surely, make safer, better and more efficacious the visits of the physician and surgeon to the sickroom and hospitals.

C. F. SCHNEIDER.

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To the Editor:

A meeting of physicians interested in Scientific Clinical Research is called for Wednesday, October 27, 1909, at John Ware Hall, Boston Medical Library, No. 8 Fenway, Boston, Massachusetts. The meeting will come to order at 10 a. m. and carry its sessions through Wednesday, and, if necessary, through Thursday and Friday.

The object of the meeting is:

First, to establish an American Association of Clinical Research;

Secondly, to establish clinical research on an



incontrovertible scientific basis in hospitals; and

Thirdly, to institute an American Journal of Clinical Research, in which the work of members of the American Association and of others doing clinical research work in a scientific manner shall be published.

You and your friends are herewith cordially invited to participate in this meeting and in the proposed movement of scientific clinical research.

This invitation is extended to all physicians and surgeons whose interest goes beyond the immediate case work of ordinary clinical societies; and it is hoped that the invitation will be accepted by all medical practitioners, irrespective of their present medical affiliations, who can appreciate the necessity for establishing on an incontrovertible scientific basis the certainties and limitations of the present practice of medicine and surgery before attempting to add to the already large and cumbersome field of medicine.

The American Association of Clinical Research is not intended to disturb the present medical affiliations of its members nor to interfere in the very least with the duties they owe and the privileges they enjoy by virtue of their affiliation with any existing national medical body.

The American Association of Clinical Research is to take cognizance of the fact that the clinic requires cold facts and conclusive methods, and upon these fundamental requirements, the structure and work of the American Association of Clinical Research are to be built.

It is of the utmost scientific importance to establish conclusively all that is at present true in medicine and surgery, and only upon such proved knowledge, to base any further advancement. The clinic deals with clinical entities and not, like the laboratories, with parts as entities. Therefore, clinical research differs, and must differ, from experimental laboratory researches. Clinical research must consider clinical entities, and when considering parts, it must consider them only as parts and not as wholes. All that subserves the object of obtaining and investigating clinical facts and principles belongs to clinical research and the laboratory is a part of the means of clinical research, but only a part.

The crux of the matter appears to be that experimental laboratory proof is not sufficient clinical proof. In order to advance in an irresistible line, clinical research must be based on a conclusive form or method of clinical proof. In experimental proof, we dislocate a part from a whole and attempt to prove the whole from the

part, as though a dislocated part could always prove the whole. Or, we attempt to prove facts in one species by facts in another species, as though the two species were identical. For instance, the experiments made on animals to elucidate certain elements of fever bring out a fact of almost insurmountable difference between man and the lower animals, the fact that man has associated with the nakedness of his body a highly perfected power for regulating his temperature, a highly developed vasomotor system and a vast array of sweat glands, a characteristic complex of things which apparently no other species of animal life presents. Experiments made on animals to prove febrile or other clinical phenomena in man, may be suggestive, but for obvious reasons cannot be conclusive. To prove observations in man, the observations must be made on man and not on animals. But observations on man even are not necessarily conclusive. Individual observations on man cannot be conclusive, because the same experience cannot be repeated, and when we prove by numbers, we compare similar but not identical experiences. Analogy is not conclusive proof. Identity alone is conclusive proof; but since, in medicine, identical experiences cannot be repeated, we must provide simultaneous identical experiences in order to have proof by identity. Clinical proof is conclusively established when all observations and experiments are made conjointly by at least two competent men, preferably of opposite ideas, at the same time. Conjoined critical observation and experiment, at the bedside and in the laboratory, as may be required, furnish simultaneous identical experiences, the proof preceding on the principle that a whole can be proved only by the whole and not by dislocated parts.

These and other weighty questions await your assistance for a necessary solution. The benefit that will accrue, both to medicine in particular and to the medical profession and humanity at large in general, from a satisfactory establishment of scientific clinical research, can be easily surmised. Come prepared, yourself and your friends, to give to this matter your mature convictions and your personal assistance. Only from a critical interchange of critically acquired opinions, can we hope for clearness and for the clarification of the medical atmosphere now charged with confusion and indifference.

Your communication, indicating your interest and your expectation of being present at the meeting in Boston on October 27, next, is eagerly awaited, and on receipt of the expression of your interest, further developments will be communicated to you personally in due time.

Please address your communication at the earliest possible date directly to James Krauss, M. D., 419 Boylston Street, Boston, Massachusetts.

Yours fraternally,

(Signed) JAMES KRAUSS, M. D.,  
Chairman Committee American Association Clinical Research.  
419 Boylston Street, Boston.

## Progress of Medical Science

### PHARMACOLOGY AND THERAPEUTICS.

Conducted by

H. A. FREUND, M. D.

#### A Report of Eleven Cases of Staphylococcus Infection Treated with Leucocyte Extract.—

In continuing their work upon the therapeutic value of leucocyte extracts, HANSON and ZINSON have had occasion to make observations upon the curative influence of these extracts upon cases of staphylococcus infections in man. In all cases the leucocytes were extracted in distilled water as in the previous work, and were administered to the patients by subcutaneous injections. The animals used for obtaining the leucocytes were rabbits.

Eleven cases of staphylococcus infection have been systematically treated and observed. In all but three of these the processes consisted of furunculosis of a chronic nature and had lasted, in spite of the most desirable hygienic conditions, for periods ranging from several months to four or five years. In none of the cases did the leucocyte extract fail to exert a markedly beneficial action, not only noticeable to the experimenters, but conceded by the attending physicians and by the patients themselves. In all but one of the more chronic cases, there was apparently complete cure, the patients themselves coming back for treatment if, after weeks of freedom, a suspicious acne pustule attracted their attention. The few acute cases which have come under observation have been even more striking in the immediately apparent local and general improvement following the injections. This is most patently illustrated in Case 10 of the series described.

In addition to these 11 cases, two cases of chronic acne were treated. Both of these were examples of the most severe type of indurated acne, and had stubbornly resisted months of treatment. The time given to these cases has been too short to warrant final judgment, there is no doubt that the lesions in both cases after four or five injections of extracts have taken on a less indurated and more acute character—a fact which argues in favor of a higher local resistance. Another

case of frontal sinus infection with staphylococcus pyogenes aureus has been favorably influenced by the leucocyte extract; but final judgment upon this case must be reserved until a longer period of observation has elapsed.

On the whole, the writers have no hesitation in concluding that marked improvement in, and often cure of, localized staphylococcus infection may be obtained by careful and systematic treatment with leucocyte extract.—*Journal of Medical Research*, April, 1909.

#### The Etiology and Treatment of Intestinal Hemorrhage.—

NILES of Atlanta says that hemorrhage from the intestine may be classed as inaccessible except when from the rectum or colon. It may be caused by many local and general conditions. Some general principles may be laid down as to treatment of severe hemorrhages above the rectum. Physical and psychic quiet must be maintained and anything tending to increase peristalsis must be avoided; the blood-pressure must not be raised, or decomposition of intestinal contents caused. No food should be given for forty-eight hours by mouth or rectum, and only cracked ice sparingly; then only liquid foods for another week. Opium should be given only in sufficient quantity to allay pain and nervousness, not enough to lock up the intestines. Ergot is of little use and ice applications to the abdomen do more harm than good. Bleeding from the rectum may be controlled by injections of the ice water and styptics. A suppository of suprarenal extract, iodoform, and ichthyol is very useful. When hemorrhage comes from the colon or upper rectum remedies must be given by mouth in order to reach the situation of bleeding, bismuth subgallate and astringents being useful. In acute bleeding adrenalin, gelatin, and calcium chloride are useful.—*Medical Record*, July 31, 1909.

**PEDIATRICS.**

Conducted by

R. S. ROWLAND, M. D.

**The Diagnosis of Permanent Mental Deficiency in Infancy and Childhood.**—LAPAGE says the medical man and nowadays especially the school medical officer, has frequently to decide whether an infant or a child has possession of its full mental powers, and in many cases it is by no means easy to give a definite opinion.

Briefly, he defines mental deficiency as meaning a permanent want of sense. There are three degrees: (a) Idiocy, or very great mental deficiency; (b) Imbecility, or considerable and marked mental deficiency; (c) Feeble-mindedness, or lesser, but nevertheless definite and permanent mental deficiency.

The well defined types most frequently met are: (1) Microcephalic, (2) Mongolian, (3) Cretinoid, (4) Epileptic, (5) Hydrocephalic, (6) Cerebral Diplegic.

Besides, there are many cases which do not conform to any well defined type, though there is no doubt about their mental deficiency. Such cases form a large proportion of the mental defectives seen at a large children's hospital and at schools for such children.

LAPAGE says the following points should be noted when examining a child for mental deficiency: (1) The family history, (2) the health of the mother during pregnancy, (3) the personal history of the child, including troubles at birth, (4) the presence or absence of physical stigmata, (5) the height and width, (6) the speech, (7) the sight, (8) the hearing, (9) the ability to sit up, to walk and to control the sphincters, and the age at which these powers developed, (10) the age at which the child began to walk, (11) the memory, attention, will, and temperament, (12) the standard in which the child is, the power of reading, writing, ciphering, and of performing manual tasks.

In conclusion the writer says that the diagnosis of the slighter forms of mental deficiency, i. e., of less degree than imbecility, or idiocy, is not as a rule made during the earlier years of life, unless the child conforms to one or the other of the well recognized types. Inability to sit up, lateness in learning to walk and talk may excite the alarm of the parents. As the child gets older, the diagnosis becomes increasingly easy. Still, up to the age of 5, 6 and 7 years, there are quite a number of cases in which the diagnosis is difficult. The points that help are

the development of the power of walking and of talking, the amount of control over the sphincter, and the general mental capacity, as judged from the actions, the speech and language, the expression, the power of memory, attention, imitation, and will, the presence of perverted instincts and habits, such as unusual wantonness and violence, or an insatiable appetite, as the eating of clay or dirt.—*The Practitioner*, August, 1909, page 211.

**Treatment of Diphtheria with Special Reference to the Prevention of Heart Failure.**—

PORTER states that it is important to recognize that some impairment of the heart muscle occurs in almost every case of diphtheria, and it is imperative that, having recognized this fact, we should realize that in prophylaxis lies our most potent therapeutic aid, and that prophylaxis may be summed up in two words—antitoxin and rest.

The essentials of treatment for the heart condition accompanying diphtheria are:

(1) Prompt and sufficient dosage of antitoxin.

(2) Rest in bed, not less than three weeks.

(3) Attention to the condition of the abdominal viscera.

(4) A nutritious, easily digested diet.

(5) Certain drugs, each according to the indications. For a slow heart, atropin; for a racing heart, camphor, and ice to the pericardium; for vascular failure, ergot.

(6) If the heart failure is incidental to an overwhelming toxemia with lethargy, hypodermoclysis.

Finally the factors determining the number of units of antitoxin to be given are:

(1) The intensity of the toxemia.

(2) The extent of the involvement.

(3) The time elapsed since the first manifestations of the disease.

(4) Whether or not there is stenosis of the air ways.

PORTER says he has never had reason to regret giving massive doses of antitoxin and has given so large an initial dose as 28,000 units, but he had learned through a series of early experiences that the cases which developed circulatory incompetence or muscular paresis almost invariably fell into the class that had been given small repeated doses over a number of days after the symptoms appeared.—*Archives of Pediatrics*, August, 1909, page 584.



## NEUROLOGY.

Conducted by

C. W. HITCHCOCK, M. D.

**A Case of Apraxia with Autopsy.**—The case is briefly thus summarized: "A man of 55, at the time of admission, was blind; was totally unable to designate the position of the limbs; could not locate touch anywhere; could not recognize objects by the sense of touch, and his touch and temperature senses were imperfect in the left hand. The left hand, although capable of some reflex acts, could not be moved voluntarily. The right hand was apraxic, and apraxic phenomena were present in chewing and walking."

"The autopsy revealed the presence of degeneration of the white matter of the right occipital and right parietal regions on the convexity, and the posterior portion of the temporal lobe, the calcarine region remaining intact." There was also degeneration of the longitudinal fasciculus and the optic radiation on the right side of the posterior portion of the corpus callosum and of the left occipital and temporal regions. Elsewhere the brain was apparently normal.

Liepmann understands apraxia as apart from agnosia (the inability to recognize objects), the apraxic being unable to perform purposeful movements of the affected limbs, but the element of inattention and lack of concentration suggest the presence of other elements in the clinical picture. The subject is not a simple one, but, on the contrary, a difficult and complicated one. The movements in this case, due to apraxia, the author believes to be:

1. The curious disturbance of gait, short, rythmical steps, usually to one side, probably not due to his blindness.

2. The false movements. In endeavoring to put a banana into his mouth, he would first place it upon his chin, a movement not ataxic in character.

3. If a pen were placed in his hand and he were asked to write, only halting movements resulted.

4. When a watch was placed in his hand, and he was requested to place it to his ear, he usually carried it to his mouth, believing that he was holding it to his ear.

5. Asked to touch his ear with his right hand, he groped in the air or grabbed his coat or his knee, believing that he was touching his ear.

6. Apraxic movement of the muscles of mastication. (The intricate paths possibly involved are variously diagrammed by the author and the matter exhaustively studied.)—RHEIN in *Journal of Nervous and Mental Diseases*, October, 1908.

**A Case of Spasmodic Syringomyelia.**—A

man of 50, who had been a farmer, a law clerk, a laborer, and a time keeper, early in 1907, observed that objects would fall from his left hand in an unaccountable way. At first there was no numbness, but a curious incapacity to estimate the pressure necessary to hold an object in the hand. Later, slight numbness appeared, later still, rigidity of arm and forearm. The patient supported the left forearm with the right arm, because, as he said, "the left arm felt heavy and the shoulder dragged." The ring and middle fingers were flexed into the hand, the two distal phalanges extended. The index finger was extended, and the wrist was generally carried in a position of slight hyper-extension. Impaired movement was due, not to any joint lesion, but to muscular resistance. There was slight spinal curvature.

The deep reflexes of the upper extremity were either absent or much diminished, while those of the lower extremity were much exaggerated; there was no true reaction of degeneration, but both galvanic and faradic reactions were lessened. There were marked changes in sensation, areas of diminished perception, of complete anesthesia, of complete analgesia, and areas of complete absence of perception of heat or cold. The skin of the fingers was glossy and slightly livid. The mental condition was that of an intelligent working man.

Diagnosis is difficult. The spasm of the upper limbs is so firm that they can scarcely be moved. This, coupled with the other symptoms led to the diagnosis of the spasmodic form of syringomyelia, described by Pierre Maree in 1900—BRUCE in July, 1909, number of *Review of Neurology and Psychiatry*.

**Acute Anterior Poliomyelitis.**—In the *Therapeutic Gazette* for September 15th, 1909, Dr. R. Barnett of Lewiston, Pa., speaks of an epidemic of this disease which occurred in Lewiston, in the summer of 1908, in which about 30 cases, with three deaths, were reported. Two of the doctor's children were of those afflicted and of these the one most seriously ill made the better (practically complete) recovery, due in large measure, as he thinks, to thorough colonic irrigation and the use of Murphy's drop-by-drop proctolysis.

Strychnin and corrosive sublimate are later of service and stricken muscles should be guarded from degeneration by proper use of electricity and massage.

## DERMATOLOGY.

Conducted by

A. P. BIDDLE, M. D.

**Animal Parasitic Skin-Diseases Communicable to Man.**—According to Leuckart more than fifty distinct species of animal parasites infest the body of man. These are found scattered throughout the various organs and systems, the skin, intestines, connective tissue between muscles, brain, eye. No organ is entirely free. The embryo within the body of the mother may be infected. At least three-fourths of the total number of parasites are found in the skin and alimentary canal.

**The Sarcoptes.** Veterinary pathologists distinguish three species of *acari* parasitic on domestic animals: (1) The *Sarcoptes*, the female of which burrows in the skin in the same way as the *Sarcoptes hominis*; (2) the *Dermatokoptes*, a species of non-burrowing acarus known in France and England as the Psorontes; and (3) the *Dermatophagus* or *Symbiotes*, also non-burrowing acari. All the sarcoptes of domesticated animals, according to Friedberger and Fröhner and others, are transmissible to man. The dermatokoptes and dermatophagus quickly perish on the human skin and produce at most only slight symptoms of irritation. The sarcoptes of the several species of animals appear for the most part to be transmissible from one species to another, but of special interest is the fact that the sarcoptes of man may be transmitted to the horse.

Scabies is a much more serious disease in domesticated animals than in man, and if not treated produces loss of nutrition and may even end fatally, as in sheep. The thickness of the hair influences not only the symptoms, but prognosis and prospects of cure; hence the seriousness of scabies in sheep. The range of hosts of the sarcoptes is very considerable, and includes the horse, sheep, dogs, cattle, goats, cats and hens. It has also been observed in the lion, leopard, llama, camel and serpent. Pernet has demonstrated one of the non-burrowing acari in the parrot, in which it produced molluscum-like tumors. Besnier has recorded a case of scabies in a man contracted from the horse, in which the disease involved, not the whole body of the man, but the face and scalp. The body was covered with rash in which the sarcoptes were found in large numbers. The mite was one-fourth greater than the human species. The acarus of the

sheep is only rarely transmitted to man. A case, however, is reported by Delaford and Bou-rignon which did not get well spontaneously after forty-nine days, and eventually the man had to be treated. The sarcoptes of the pig has been observed in man; an eruption manifested itself the same day in which contact with the animal took place. The acarus of the dog, according to Delaford, may be transmitted to man, but produces only a slight eruption. The acarus of the hen, it is stated, is also transmissible to man.

The sarcoptes of animals, with the exception of *Sarcoptes notocdres* of the cat and *Sarcoptes mutans* of birds, are distinguished from the human mite only by minute differences as to size. Megnin considers them as varieties, and not distinct species.

Sarcoptic scabies of the horse usually begins on the head and neck, but it may start, according to the mode of infection, on almost any part of the body. Only very rarely does it spread all over the body, for it is usually limited to the neck, head and shoulders. The itching is extraordinarily severe, more especially at night, leading the horse to rub and gnaw the parts. Circumscribed bald patches appear early in the course of the disease, accompanied by formation of papules and vesicles.

The scratched part becomes scaly or covered with scabs. In long standing cases the skin becomes indurated and fissured, and if the animal be neglected the disease may spread all over the body, the general nutrition becomes affected, and the animal may die of exhaustion. In the milder cases the animal may recover, but in the severer ones, and especially when the disease has been neglected or badly treated, the prognosis is unfavorable.—LESLIE ROBERTS, M. D., *British Journal of Dermatology*, March, 1907.

**Naevus Pigmentosus, Treated with Carbon Dioxide.**—The patient was a girl of twelve years, who had a pigmented patch on the right ear and cheek, one and one-half by two inches in size. The patient was exhibited to demonstrate the excellent results obtained by this method of treatment. Four applications of the snow had been made, each lasting about one-half minute. Presented by DR. SROUT, before the *Philadelphia Dermatological Society*, March 16, 1909.

## OTOLOGY.

Conducted by

EMIL AMBERG, M. D.

**Etiology of Acute Otitis.**—NEUMANN and RUTIN made use of 91 cases (97 ears) in order to determine first; whether the epi- or mesotympanic location of the suppuration has any influence upon the course of the disease and especially whether one of these locations leads to a suppurative mastoiditis with certainty or in the great majority of cases, or whether this suppurative mastoiditis is dependent upon other circumstances.

2. Whether an acute mastoiditis is created more by certain microbes than by others, or whether other circumstances are solely to be accused.

Of the cases examined 43 were operated upon. Seven of these were epitympanic suppurations, 36 mesotympanic, 54 healed spontaneously. Of these 11 were epitympanic suppurations and 43 mesotympanic. Considering that altogether 19 epitympanic and 78 mesotympanic suppurations were investigated they conclude that the number of the epi- and meso-tympanic cases which were cured with operation and that were cured without operation is about equal, which shows that the localization of the suppuration does not influence the development of the empyema of the mastoid process.

Another series of cases was used in order to determine whether the kind of microbe influences the development of an acute suppurative mastoiditis. Only cases operated upon were used for this series. They found, 60 times streptococcus pyogenes aureus, 13 times diplococcus, three times strepto-diplococci, six times streptococcus mucosus, five times staphylococcus pyogenes aureus, three times bacillus pyocyaneus, once bacterium coli.

Of the cases of the second series which were investigated, 54 healed spontaneously, three of them were middle ear suppurations caused by capsulated cocci, 51 caused by microbes without a capsule.

Of the 43 cases which came to an operation 14 were caused by capsulated cocci, 29 by microorganisms without a capsule. Of 18 cases of streptococcus mucosus 16 came to an operation and only two healed spontaneously. The difference of the anatomical structure of the mastoid process has more importance in regard to the development of acute mastoiditis than the difference between capsulated microbes or those without a capsule as Politzer has already said in the first edition of his textbook. In most cases in which they paid attention to this condition they

could observe the pneumatic form of the mastoid process or when there was a great destruction the conclusion could be drawn from the pneumatic cells which were left in the zygomatic process or at the tip near the sinus or at other places. The reason of the importance of a pneumatic mastoid process upon the development of an acute mastoiditis seems to be the following. Any acute otitis is an inflammatory disease of all pneumatic spaces of the temporal bone and produces an exudate in which microbes thrive well. In a sclerotic mastoid process we can scarcely think of an inflammation and development of microbes; in the diploitic mastoid process the presence of numerous cell elements and the rich blood supply do not appear to be favorable to the development of microbes. Clinically it would be very important to know beforehand whether we have to deal with a pneumatic mastoid process. The various methods: Roentgen rays, percussion and auscultation, are not reliable. According to their clinical experiences the presence of a pneumatic mastoid process can be suspected if there is pain in the mastoid process or if there is tenderness on pressure during the first days of an acute otitis.

The otitis caused by the streptococcus mucosus furnishes a picture of its own. Naturally, also, this otitis can heal, but its tendency to heal definitely is so great and it seems that a disappearing mucosus otitis is responsible for a number of mastoid affections which were formerly regarded as primary. In this otitis the healing of the inflammation in the tympanic cavity takes place in the first or second week, but there remains a considerable disturbance of hearing mostly connected with continuous subjective noises and an appearance of the drummembrane which reminds one of a secretory catarrh. The drummembrane shows a moist reddish coloring. The details are still to be recognized, but the outlines are not very clear, the light-reflex is not distinct and the lustre is faint. There is no pain, only a slight, sometimes very little pronounced, sensitiveness to pressure on some part of the mastoid process. Paracentesis always frees a mucous or mucopurulent exudate. Of their cases two were extradural abscesses, one meningitis, one abscess of the brain, five descending abscesses. In all cases the destruction of the bone and the gravity of the disease were accompanied only by slight symptoms.—*Archiv fuer Obreheilkunde*, April 15, 1909.



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## Original Articles

### UNUSUAL FORMS OF SYPHILIS OF THE LIVER\*

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Acquired syphilis of the liver is a common malady, yet the writer believes that its significance is not fully appreciated, either in practice or in the literature. When one considers the great prevalence of syphilis, both urban and rural, and considers that we possess absolute specifics against this infection, one is surprised that he does not oftener consider the possibility of lues in doubtful cases. In the seventeenth century, hepatic syphilis was described by Botalli, Petronius and Mercurialis, and later, more fully, by Bonet, Portal and Ricard; yet Dittrich, in 1849, first fully developed the topic.

Acquired syphilis of the liver exists in two main classic forms, the syphilitic cirrhosis and hepatic gummata. It is not the purpose of this paper to describe these well-known types, except so far as they may mimic other diseases, as hepatic cancer and abscess, gastric disease, gall-stones, typhoid, sepsis, cirrhosis of the liver and pylephlebitis.

#### 1. Hepatic Gummata Resembling Cancer of the Liver.

\*Read before the Michigan State Medical Society, Kalamazoo meeting, September 15 and 16, 1909.

This confusion is one of the oldest, and Oppolzer and Bochdalek mistook hepatic syphilis for cancer. (a) *Age* is no criterion, although it is commonly asserted that syphilis is prone to develop in those under 40 years of age, whereas cancer prevails largely after that year. In personal experience, syphilis is as common after, as before, the fortieth year, and it is not uncommon for gummata to form in the liver 20, 30 or 40 years after the initial chancre. (b) It is maintained that in syphilis, the *tumors* are generally smaller than in cancer, but gummata may so distend the liver that the organ occupies most of the abdominal cavity. In one very emaciated patient, an epigastric swelling, larger than the patient's head, subsided under mercury and iodides. The therapy was suggested by finding pupils of the Argyll-Robertson type. These luetic tumors generally develop more slowly than cancer, at least after they are once detected, and remain more stationary, and compression symptoms, as crowding of the enlarged liver upon the lungs and other parts, are more suggestive of cancer than of syphilis.

(c) The *edge of the liver* is rather

smooth or its anterior surface, near the suspensory ligament and near its palpable edge, is lobulated by deep, radiating furrows resulting from cicatrization, and organization of the gummata.

(d) *Ascites and Icterus*.—Fournier and others have remarked that the absence of ascites is a rather safe criterion for syphilis as against, e. g., cancer, and this dictum doubtless holds for most cases, but cancer will be considered first in the minority of cases in which ascites is associated with icterus and emaciation, which later, in extreme instances, may suggest cachexia. The uncommon ascites results from syphilitic cirrhosis, from amyloid degeneration or, as a terminal event, from cardiac weakness. Syphilitic ascites is frequently combined with albuminuria.

(e) *Splenic enlargement* is exceptional and follows the compression of the portal vein by a gumma or follows amyloid degeneration of the spleen or gummata in its substance.

(f) *Pain*.—Pain on movement, pain in the right shoulder and tenderness over the liver almost invariably indicate perihepatitis, and therefore suggest syphilis. If the perihepatitis is recent, a friction rub may be heard over the liver; if it is old, adhesions to the colon or stomach and abolition of the respiratory excursion of the liver may result. Pain is important and conspicuous both in cancer and syphilis. In two cases in which large masses disappeared under specific treatment, paroxysmal pain was probably due to coincident, though poorly developed tabes. These observations are interesting in view of the fact that there is said to be a degree of antagonism between syphilis of the liver and the parasyphilitic nervous diseases, as tabes. Search for other evidences of syphilis and a history of venereal infection are important, but these considerations are purposely

subordinated, as we must frequently diagnosticate or suspect syphilis in their absence.

(g) *Emaciation and Cachexia*.—In hepatic syphilis, emaciation may attain such an extreme degree of development that carcinomatous cachexia is diagnosticated without much hesitation. Clearly hepatic symptoms, such as tumors, ascites, icterus and enlarged liver, combined with anemia, emaciation and cachexia, which are probably due to metabolic disturbance, make differentiation impossible, except by the help of successful therapy by mercury and iodides. In a patient of Dr. Wm. E. Morgan, there was an enormous ascites and extreme emaciation; an operation disclosed a gummatous and lobulated liver, though previously carcinoma was almost certain. After the incision, specific remedies produced immediate and permanent recovery.

In just this group of cases, gastrointestinal symptoms may seem to indicate a primary cancer in the stomach or bowels. In one instance there were tenderness and pain in the pyloric region, vomiting, occult blood in the vomitus and feces, absence of free hydrochloric acid in the test-meal and cachexia; the presence of nodes in both lobes of the liver strengthened the probability of gastric cancer with secondary metastases in the liver. The history of venereal infection suggested the bare possibility of syphilis and sublimate hypodermics and iodides wrought a complete cure. Quincke (reference 3) describes an instance of dilatation of the stomach, due to gummata in the mesentery, which responded, rapidly and permanently, to iodides. Inasmuch as gastrointestinal symptoms suggest a primary neoplasm in the alimentary tract, it is well to note Marcuse's observation that two-thirds of the patients with hepatic gummata exhibit early digestive disturbance.

## **2. Hepatic Gummata Resembling Abscess of the Liver.**

Luetic liver symptoms, as pain, tenderness and enlargement, together with fever, chills and other septicemic manifestations, may closely resemble liver abscess. In a patient of Dr. Lesage, there was an exquisitely tender point in the epigastrium with a leucocytosis of 21,000, chills, fever reaching 102° or 103° over a period of nine months, and a loss of 40 pounds in weight. Under mercurial injections and iodide of potash internally, every symptom subsided in a week, never to recur. Trinkler, Lennhoff and Ebstein noted a pseudofluctuation which heightened the resemblance to liver abscess.

In many, possibly most personal cases, the leucocyte count did not run high, but in three instances it ran 21,000, 17,300 and 15,200. The fever may be most deceptive (reference 4) and will be considered under topic six.

## **3. Gummata of the Liver Simulating Tuberculosis, Typhoid, Septicopyemia, Malaria, etc.**

In the absence of any localizing visceral, e. g., hepatic symptoms, fever alone may prove most deceptive. In one patient, seen with Dr. Black, the fever ran many weeks; blood cultures were negative, the Widal reaction was negative and, till the autopsy disclosed widely diffused gummata in the liver, typhoid, sepsis and meningitis were considered, but without any definite conclusion being reached. E. G. Janeway (reference 15) reported cases in which the fever simulated pulmonary tuberculosis, Baümler (reference 6) described cases suggesting tuberculosis and typhoid, and Mannaberg (reference 7) described an intermittent fever mistaken for malaria and septicemia, until anti-syphilitic therapy dissipated all doubt.

## **4. Gummatous Hepatitis Resembling Gall-Stones.**

Riedel (reference 1) particularly has drawn attention to an important group of cases, which simulate gall-stones, cholecystitis, and, if icterus is present, even resemble calculous obstruction of the common duct. Coincident temperature may obscure the diagnosis. In this type, the gall-bladder is never alone involved, but there is always coincident syphilis of the liver. Riedel reported several such cases and Trinkler (reference 2) found 13 reported operations, in which liver gummata were found instead of some other suspected surgical disease.

## **5. Syphilitic Cirrhosis Resembling Alcoholic Cirrhosis.**

There is no absolute criterion for differentiation between syphilitic and portal cirrhosis. In syphilitic induration, the size of the liver is more commonly increased than decreased, even though the process is destructive rather than hyperplastic. The new-formed connective tissue follows the portal vein and its ramifications into the liver substance, the lobules of which are more invaded than in alcoholic cirrhosis. An obliterative endarteritis may augment the damage to the liver cells which degenerate and atrophy, particularly toward the anterior border of the liver. The surface of the liver is uneven with furrows or nodules and its edge is somewhat sharper than in the ordinary form of cirrhosis. Perihepatitis is common and results in various adhesions. Icterus occurs in one-third of the cases and the attendant enlargement of the spleen develops from stasis, toxemia or amyloid degeneration. Ascites is less common than in the alcoholic variety and develops later and is prone to recur after tapping. A longer clinical course and fairly good nutrition are said to be characteristic, but there are many exceptions. Two greatly re-



duced subjects, apparently suffering from advanced cirrhosis, recovered completely under iodides.

#### 6. Syphilitic Pylephlebitis, with Exceptionally High and Protracted Fever, Chills and Emaciation.

The following case excited great interest. A young man, aged 25 years, entered Mercy Hospital September 13, 1908. His previous history was entirely negative. Four days before his entrance he developed a severe headache, fever, pains in the back and he felt weak. He vomited several times daily for four days. On examination, to avoid immaterial details, there was slight tenderness over the liver, a clearly palpable spleen and the abdominal wall was retracted. The Widal reaction, ophthalmo-reaction, blood cultures and examination for the plasmodia were negative and the leucocyte count ran 6,400, 11,400, 4,000, 6,400, 6,600, 6,400, etc. Epistaxis occurred repeatedly. The pulse ran between 54 and 108. The temperature for over one week oscillated between 98 and 105.2° with two severe rigors. Then came a week with nearly normal, normal, and even subnormal temperature. The following week there was fever not exceeding 102° and the week later the registration was normal or subnormal. The case baffled us and no diagnosis could be made. On October 8th, the patient complained of a sudden severe pain over the gall-bladder region and over night a very profuse effusion of fluid into the peritoneum developed. For three weeks there were almost daily rigors, sharp elevations of temperature to various heights, 104.4° being the maximum. From November 1st to November 16th the rigors and sweats persisted and the fever was of the pyemic type, the daily variation sometimes amounting to 8°. I then inclined to the idea that there was a suppurative pylephlebitis and Dr. Murphy

confirmed my idea that the affection was not operable. For the next three weeks, although the fever and chills occurred only at intervals of two to four or five days, the ascites became enormous, vomiting was frequent and the patient became extremely prostrated and anemic. The suspicion of syphilis came into my mind, although there was no luetic history; mercurial injections and iodides internally in five days brought the temperature down and from December 3rd, 1908, to January 10th, 1909, there were but four rises of temperature. There was some delay in obtaining a Wassermann serum test; in January Dr. Adolph Gehrmann reported the test was not positive. Since then the patient has gained sixty pounds and has been in perfect health.

The recital of such a case report is, of course, open to criticism. The affection was clearly some severe infection and the most careful tests for its cause were negative. The brusque development of pain over the portal vein region, the sudden tenderness and massive ascites argue for pylephlebitis or some sudden compression of the portal vein. Naturally, a septic pylephlebitis would be considered first. After the possibility of syphilis was entertained, the very prompt response to mercury and iodides was most suggestive, if a diagnosis *ex juvantibus* is ever logical. Rosenbach and others have criticised diagnoses based only upon the results of therapy, but since Klemperer (reference 10) reported the cure of hepatic enlargement attended by chills and fever, some dozen similar cases have been described by trustworthy observers (reference 9 to 15).

The subject of fever in syphilis dates from Werlhof (1732), J. Frank (1821) and Yvarren (1854). Güntz in 1865 was the first to record syphilitic fever taken with the thermometer, and Bäumlér (reference 5 and 6) wrote upon the sub-

ject. Fever in hepatic syphilis was described by Frerichs and Gerhardt and within recent years Stauder, Mannaberg, Klemperer, Janeway and others have written convincing articles which have not attracted the attention they merit (references 7 to 15 inclusive). Some of these reports have been considered above under those types of syphilis simulating gall-stone, abscess, sepsis, etc.

In conclusion, the following points may be emphasized:

1. Acquired hepatic syphilis is commonly encountered in one of two classic types, (a) the syphilitic cirrhosis and (b) tumor-like nodes, gummatous hepatitis.

2. Aside from an accurate history or other clear stigmata of syphilis, gummata may precisely simulate hepatic cancer, even to the extent of characteristic cachexia.

3. Sepsis without definite visceral localization or a septicopyemic type resembling liver abscess may be mimicked exactly.

4. Fever, chills, sweats, leucocytosis and other toxemic phenomena may develop in hepatic syphilis, which then may masquerade as typhoid, malaria, tuberculosis or sepsis.

5. Gall-stones and cholecystitis may be closely simulated.

6. What is seemingly a suppurative pylephlebitis with intensely septicopyemic symptoms may be syphilis, a spirochete septicemia.

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# DISCUSSION.

DR. W. F. BREAKEY, Ann Arbor: In acquired syphilis particularly, and that in early life the activity of this large gland must account in a large degree for the liver being the seat by preference of all the attacks of syphilis on the abdominal viscera. In all cases a thorough investigation should be made to determine the diagnosis. Many patients consult a physician with an obscure history or none at all; and even when a patient does not intend to deceive there may be abundant reason for suspecting syphilis. The period of latency is usually uncertain, and it may cover a considerable number of years, and while the physician may prescribe treatment as an aid to diagnosis, yet he is entirely justifiable in so doing when other measures have been followed and no clew results. If with the modern tests for syphilis the *Spirocheta pallida* is found, the way is clear, and there is no hesitation as to what to do. If the spirochetes are not found, and they often are not, and a longer period elapses during which the disease is suspected, in the absence of clear and definite physical signs by which we may determine carcinoma or nodular condi-

tions of the liver, it is right, in my opinion, to try antisyphilitic treatment. Our function as physicians is to treat this disease and to lessen it, if it is not possible for us to stamp it out. I do not see why it is not just as feasible to try to stamp out syphilis as tuberculosis. There is need for higher requirements by teaching bodies and examining boards on the subject of syphilis. We should encourage the study of this disease, and one essential thing is to disabuse the public mind of the disgrace of it, because so many patients who have the disease have acquired it innocently.

DR. ANDREW P. BIDDLE, Detroit: I wish to refer specifically to gummatous lesions, and would emphasize the point that time has no limits in the formation of gumma. While it is usually taught that gumma is a late appearing lesion, yet we know that a patient may have gumma in certain forms of destructive syphilis as early as the first few months. Another point is the relationship of syphilis to other obscure conditions. When we consider that the influence of syphilis is particularly on the blood-vessels and on the nervous system, we can easily see why there is such a variety of manifestations. We know how difficult it is, even when we see cancer on the face, to differentiate it from some of the lesions of syphilis, and it is no wonder that it is difficult sometimes to differentiate these lesions when they involve the internal organs. It is difficult with all the manifestations present to differentiate between cancer of the liver or simple gummatous formation of the liver.

DR. J. COLLINS JOHNSTON, Grand Rapids: As an illustration of the good results of what we may call the diagnostic use of syphilitic treatment in doubtful cases of the kind referred to by Dr. Edwards, I want to report briefly an interesting case in my own experience. A year-and-a-half ago I was called to see a man in a little town near Grand Rapids who had been ill for several months, the prominent symptoms being those of alcoholic cirrhosis of the liver. He had been in the hospital two or three weeks and had been seen by several physicians, all of whom, diagnosed either cancer of the liver or alcoholic cirrhosis. He went to Ann Arbor and was sent home to die of alcoholic cirrhosis of the liver. I do not know what prompted me to think the case might be syphilitic. It was decided by the attending physician and myself that the man had

no hope if the diagnosis already made was correct. He had been in bed several weeks. He had been tapped a number of times, large quantities of liquid being removed from the abdomen. We put him on hypodermics of mercury and iodids internally. Under this treatment he improved rapidly, and two or three months later appeared in my office. I have seen him several times during the last year and apparently he is absolutely well, but his liver still remains large. I would like to ask Dr. Edwards if in a case of hypertrophic cirrhosis or syphilitic cirrhosis the liver ever returns to its normal size.

DR. FRANK SMITHIES, Ann Arbor: Three cases have come under my notice recently, all of which gave the hemolytic test by the original Wassermann procedure. One case particularly had been diagnosed as pernicious anemia, on account of anemia and symptoms of cachexia; it had also been diagnosed as carcinoma. The patient vomited constantly, lost 60 pounds, and altogether was in a bad way. The Wassermann test revealed the absence of hemolysis. The patient, after having vigorous lavage, promptly stopped vomiting, and was put on combined treatment. I saw him recently and he has gained within two pounds of his gross weight, and feels well in every way. A patient seen last year had an epigastric tumor, but there were no marked gastric symptoms. The patient insisted on being operated on; a portion of the tumor was removed and was found to be a gumma of the liver. A third case showed a roundish tumor in the epigastrium, which appeared to be beyond the stomach. The stomach could be inflated and did not move the tumor, which did not have any relation to the large bowel. It had no relation apparently to the liver, yet on opening the abdomen it was found to be a large gumma that had a deep connection with the liver; it cleared up to a certain degree under the combined treatment. All these patients gave the Wassermann reaction by the original procedure. The first patient has not given such a prompt reaction since the beginning of the combined treatment.

DR. MORTON, Battle Creek: I would emphasize the fact that there is such a thing as luetic fever. In the last three or four years I have had three cases that puzzled me a great deal. These patients had been treated for tuberculosis. One of them had been kept on the usual dietetic and fresh air treatment for nearly three months, and kept a



regular temperature chart. He came under my care, and I could find nothing the matter with his lungs. I could not find any evidence of trouble in the respiratory tract. The man gave a history of having had syphilis seventeen years previously. I observed him for a few days, during which time the temperature ranged from 102 to 104 F. every afternoon, and in the morning it ranged from 99 to 100 F. I had read Janeway's article on luetic fever, and had also seen cases reported, and I tried the iodid treatment. In two days his temperature was normal, and two days later he had no further trouble. The other two patients behaved in the same way. It should be impressed on the minds of practitioners, therefore, that there is such a thing as luetic fever. In the cases mentioned, there was no enlargement of the liver, and I could find no abnormal condition of any of the organs of the body.

DR. W. M. DONALD, Detroit: Is it not a fact, borne out by autopsies, that hepatic syphilis in

prenatal or postnatal life is of the interstitial type? Is it not a fact that hepatic syphilis in later life is almost entirely gummatous?

DR. ARTHUR R. EDWARDS, Chicago: It is true that interstitial hepatitis is more frequent in the hereditary than in the acquired type of syphilis; and the converse is true, although either form may be observed in either type of syphilis. As a rule, the liver remains larger afterward, although in some instances there is apparent recovery. In other instances the liver becomes smaller than normal. With regard to cases resembling pulmonary tuberculosis in the absence of any visceral findings, one cannot say in such instances that temperature of that variety is always due to syphilis of the liver. It may be due to syphilis of the bones, or to syphilis of any of the viscera. I think that the hypodermic method of treating these patients gives more rapid results than any other method of administering the mercury, although it is sometimes painful and some patients will not tolerate it.

**Further Observations Upon Rigidity of the Chest Muscles as a Sign of Involvement of the Pulmonary Parenchyma.**—Pottenger, of Monrovia, Cal., describes a new sign for the examination of the pulmonary tissues. By gentle pressure with the tips of the fingers over the intercostal spaces the experienced touch will detect a resistance of the muscles that overlie inflamed parts. This is a constant sign, as it affects the intercostal muscles. We can map out areas of infection and tell the nature of the infiltration as to degree. This is of great importance in pulmonary tuberculosis and of more value than percussion, since it allows us to recognize the acuteness of the process. Rigidity of the muscles is confined to the groups over the diseased points and organs. In acute inflammations it may be due to stimulation of the nerves, which causes tonic muscular

contraction. Sooner or later these muscles undergo pathological changes which end in a permanent rigidity. Microscopic examination shows that they have undergone hyaline degeneration. We can map out areas of infection and lagging of the respiration of one side. It is a very important sign in apical infection. Impeded or diminished respiratory murmur results from this muscle spasm. Ankylosis of the superior costal articulations also results. The author has detected muscle rigidity in every case of pulmonary tuberculosis since he began to use this sign.—*Medical Record*, October 23, 1909.

To differentiate a tender spot from a simulated pain, it will often be observed that pressure on the former causes a decided increase of pulse rate, while in simulation it does not.—*Am. J. Surg.*

## SIMPLE REFRACTION FOR FAMILY PHYSICIANS; ITS PROMOTION DURING 1908-09\*

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LEARTUS CONNOR, A.B., M. D.,

Detroit.

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At its 1908 meeting the Michigan State Medical Society publicly initiated a movement "to qualify family physicians for the refractive work now in the hands of opticians." This paper aims to sketch briefly our progress. By some oversight, our medical colleges have rarely taught their students practical refraction, while they inoculated them with the idea, that good refractive work was possible only to a specialist. Meantime the science and art of refraction reached a high standard of perfection in the hands of specialists, working outside the colleges. Naturally this standard was impossible to the average student or family physician, and one adapted to their needs has not found its way into college curricula. The latter must be such that the student can master it without interfering with his other courses, and the family doctor practice, while caring for the other disorders of his patients. It will certainly include simple refraction, as thereby, with the aid of the ophthalmologist in complicated cases, the refractive needs of all the people will be fully met.

Opticians began the practice of refraction, because ophthalmologists were too few, too widely scattered, and too high-priced and the family doctors not only utterly ignorant of simple refractive work but afraid to attempt its mastery. Now by organization and business push,

opticians so impressed the people to whom they prescribed and sold spectacles, that sixteen State Legislatures have granted them special rights, stolen from the medical acts, to practice that ophthalmology which family physicians should be doing. They showed the Legislatures that our system of medical education failed to provide physicians able to refract the people's eyes. Our movement aims to promote such training of the family physician that he with the ophthalmologist will be adequate to care for the refractive needs of the people, and so obviate the present necessity for optometrists.

The great obstacle to this movement is the widespread conviction that family physicians cannot master, much less practice, simple refraction. Yet it is in evidence that laymen have learned and do successfully practice this part of medicine; surely the physician's training should enable him to outstrip the laymen in this competitive race, and it would, if he made equal effort. Farther, the evidence is overwhelming that family physicians have mastered simple refraction and are now successfully practicing it in connection with their other work. In my possession are many letters establishing this fact. Time admits the reading of but two and these only in abstract.

The first letter is from Dr. Gerald Edmunds, of Honor, Mich., and dated May 2, 1909. He says: "I think it may interest you to know that, for some time, I have tried to fit myself for general practice. I graduated from the Chicago

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\*Read before the Michigan State Medical Society, Kalamazoo meeting, September 15 and 16, 1909.

College of Physicians and Surgeons in 1892 and practiced in Chicago about eight years, when I located in this thriving little town. I used to have dreams of special practice as an "unlimited practitioner," but when I located in a small place I found my time so occupied that it was all I could do to make a better practitioner of myself. After reading your article on the "neglected patches" in the field of medical practice, I came to the conclusion that I had long neglected to fill the wants of my families, because I was not equipped to correct common defects of vision, and besides, my son was troubled with a simple refractive error which I was incompetent to correct. So I bought Theobald "On the Eye" and Parker on refraction (I already had Noyes) and spent my spare time in studying. I then bought from the Johnston Optical Company a small trial case and some test letters and went to work. I fitted my first case the latter part of November, 1908, and since have refracted about thirty-five moderately simple cases, without any effort to push this as a specialty—simply having the paraphernalia for refraction about the office brought this work. I had formerly referred such cases to persons at a distance, much to the inconvenience of my patient. After this experience I am satisfied that any physician, with a reasonable amount of push, can add to his income, in a legitimate way, quite a few dollars during the year and benefit the public a great deal.

I think most physicians dislike the idea of being general practitioners and feel that unless they at least claim a specialty the public will not think they amount to much. I am proud of being a general practitioner and think there is a great field for "specializing" along the line of "general practice." The profession of medicine is too vast to be grasped in all branches, in all details, by one mind."

The second letter is from Dr. W. C. Garvin, of Millington, Mich, and dated June 20, 1909.

Omitting personal matter, he says: "I am enclosing herewith the program of the last meeting of the Tuscola County Medical Society, at which Dr. Hays told his personal experience in refraction and the paper was very generally discussed. There are six physicians in Tuscola County now doing something along this line, and I think the traveling optometrists will find poor picking in this section in the future.

"Since Oct. 17, 1908, I have fitted eighteen people with glasses and think they have all been satisfied, even if I have not done every case to my own satisfaction. I learn something from each case I refract and unless I can improve the vision do not order glasses. Thus far I have found no case where I thought glasses were really needed, that I have been unable to relieve, but should I find such a case I will refer it to the most available specialist."

The family physician refractive work reported in these letters, and much more told in letters which time forbids reading, was stimulated by the unanimous passage by this society last year of the following preamble and resolutions offered by Leartus Connor and seconded by F. W. Robbins:

"Whereas, Michigan now has three classes of medical practitioners, viz., (1) the family physician, (2) specialist, (3) and remnants, as opticians, osteopaths, Christian Scientists, etc., etc. (all persons devoid of adequate training for the duties of the physician).

"Whereas, Among these remnants are the optometrists, who live on the cases of refractive defects neglected by the family doctor and without the specialist's field.

"Whereas, It is discreditable to the medical profession and harmful to the people that any part of medical practice



fall into the hands of unqualified persons;

"Whereas, It being a physical impossibility for the fully trained ophthalmologist to care for all this neglected class, it remains for the family doctor to qualify himself to recognize and treat the simple cases, seeking expert aid as emergency demands, if the medical profession is to occupy its entire field. Therefore be it

"Resolved, That the Councilors of the Michigan State Medical Society be directed to take this matter up in their several county societies and so educate their constituents that between the family physician and ophthalmologist the needs of the people be fairly and fully met.

"Resolved, That the Council request the Michigan State Board of Registration (1) to place among its requirements for a license to practice medicine, a practical demonstration by the applicant of his ability to recognize and treat the infectious diseases of the eye and the uveal tract; and (2) that it co-operate with our Legislative and Public Policy Committee in all practical efforts to prevent the enactment by the Michigan Legislature of a law giving opticians the legal right to practice ophthalmology in Michigan."

These resolutions were the outcome of a comprehensive study of the entire subject during the preparation of a paper on "Ophthalmology for General Practitioners," read before the American Academy of Ophthalmology and published in the *Jour. A. M. A.* Nov. 28, 1908. The facts of the paper were granted by the Academy, the action advised, approved, but regarded as impracticable. It was hoped that the resolutions would awaken the profession to study the situation, and induce some to qualify themselves to practice simple refraction; our letters show that these hopes were in some degree realized.

Further, the subject was taken up with individual members of the Michigan State Board of Registration, and on Feb. 12, 1909, the Secretary, Dr. B. D. Harison, sent the following letter to medical colleges:

"I am directed by the chairman of the Examination Committee, who has full charge of the matter under the resolution of the Board, that in the future, beginning with the next spring examination, all applicants for license will be required to demonstrate their fitness to do practical refraction work, in addition to the usual written paper upon diseases of the eye, ear, nose, and throat. The examination on this subject will be conducted by a specialist and will constitute an integral part of the examination, and failure to obtain fifty per cent of possible standing will subject the applicant to refusal of license."—It is reported that on receipt of this notice many colleges for the first time began to teach their students simple refraction. Efforts are being made to have other State Registration Boards follow Michigan's example, and it is confidently expected that in the near future all who enter the practice of medicine will be able to do simple refraction. This requirement is definite; fair to the applicant; helpful to the profession, and beneficial to the people.

Beside the paper already mentioned, the writer read others before the Wayne and Tuscola County Medical Societies and the American Academy of Medicine. He also published in the *Journal A. M. A.*, April 10, 1909, a letter giving in some detail, reasons why family doctors should be able to do simple refraction.—Dr. Alvin A. Hubbell, of Buffalo, N. Y., in his address as Chairman of the Ophthalmic Section, A. M. A., June, 1909, discussed the "Ophthalmic Qualifications of the Family Doctor and Specialist." The committee appointed by the Section to report on this address recommended the following:

1. "Every general practitioner should have the training in ophthalmology which will enable him to manage infectious diseases of the eye and its refractive defects. To obtain this qualification Medical Colleges should make such training obligatory and State Boards of Registration demand it as a condition for license.

2. "Every general practitioner, who desires to become an ophthalmologist, should add to his training a comprehensive study of ophthalmology; do experimental work in the laboratory; and personal clinical experience in hospital or private office. To ensure these qualifications, there should be appointed on each State Board of Registration, at least one ophthalmologist, to examine applicants for license to practice ophthalmology.

3. "If these recommendations be approved by the Section, it is urged that a committee of three be appointed by the chair to study the subject and report their findings of the detailed measures necessary to secure trained family physicians, adequate for the needs of all the people, when suffering from ocular disabilities."

The recommendations were unanimously adopted by the Section and the following committee appointed, viz., Leartus Connor, Detroit; James Thornton, Philadelphia, and Albert R. Baker, Cleveland. It will be noted that future ophthalmologists will be asked to have a general practitioner diploma supplemented by a comprehensive study of ophthalmology, including experimental laboratory work and clinical experience in hospital or private office, all to be demonstrated to the satisfaction of the ophthalmological member of the State Board of Registration. As this Section numbers over eleven hundred members the significance of its indorsement of our resolutions is apparent.

From evidence thus presented the proposition that "the family physician ought to be able to do simple refraction" has been approved by the Michigan State Medical Society, the American Academy of Ophthalmology and Otolaryngology, the American Academy of Medicine, the Section of Ophthalmology, A. M. A., and is required by the Michigan State Board of Registration as a condition for license to practice medicine.

By private letters, over signatures of their writers, it is shown that some family doctors have learned and successfully practiced the art of simple refraction. It were an insult to the other physicians in Michigan to suppose them inferior in this respect. Doubtless most are surfeited with practice, and do not care to make the attempt, but if they tried they would surely succeed. Possibly the new men who enter the field will make the older ones take notice as their patients leave them for the new doctor who can manage simple refraction.

At its meeting, June 14, 1909, the Tuscola County Medical Society listened to a paper by one of its family doctors on "Some Points on Refraction," which was generally discussed by his fellow-members, many of whom are earnest students of the subject. The same will occur in other counties, as a considerable number of their members master "simple refraction." Naturally this will lead to the mastery and discussion of other topics in general practice ophthalmology. This new line of society activity will augment the interest in and power of county societies, and so of the State Society. As has occurred in Tuscola County, the opticians will lose their ophthalmic practice in the same proportion that family physicians become qualified therefor.

It is much that the largest ophthalmological society in the world, the Oph-

thalmological Section of the A. M. A., has indorsed this movement, and has appointed a committee to encourage State Registration Boards to require a working knowledge of simple refraction as a condition for granting a license to practice medicine; and medical colleges to introduce it into their curricula. So far as I am aware this is the first special society to encourage the family doctor to advance his interests and that of his families by cultivating a neglected field allied to its own.

It counts for much that the Michigan State Board of Registration, in behalf of the people, demands a working knowl-

edge of simple refraction as a condition for giving a license, because medical colleges must prepare their graduates therefor.

With results thus briefly sketched, gained during a single year, surely our Council will be encouraged to more active effort, in stimulating the members of their county societies (not surfeited with business) to master the technique of simple refraction.

All friends of the movement will be incited to greater activity and larger faith in its early triumph.

91 Lafayette Boulevard.

## REPORTS OF CASES IN WHICH THE EXTRACT OF THE CORPUS LUTEUM HAS BEEN USED\*

W. H. MORLEY, M.D.,  
Detroit

(From the Resarch Laboratory of  
Parke, Davis & Co.)

Owing to the shortness of time at my disposal, it will be impossible to touch upon the theoretical and experimental sides of this question. Even a hasty resumé of the literature has been left out. To bring the most important part of the subject at once to your attention, I have thought it best to commence with a report of the cases in which the extract of the corpus luteum has been used.

### Report of Clinical Cases.

**Case No. 1.** A patient of Dr. E. E. Shifferstine, of Tamaque, Pa., is 36

years old, married, nullipara. Her family, personal, and menstrual history is negative. On March 12, 1908, she was operated upon and both tubes, ovaries, and the uterus removed. About three weeks after the operation, the patient began to experience flashes of heat, insomnia, severe nervousness, and pain in the small of her back. The symptoms were increased at the time when her menses should appear. In other words, she has a regular monthly exacerbation of these symptoms. Treatment was commenced with Ext. Corp. Lutea, gr. V, t. i. d. The symptoms at once disappeared and the patient has been much improved. She has had only a slight return of the symptoms, which yield readily to treatment with the extract. A later report of this case (Sept. 15, 1909) from the physician states that the pa-

\*Read before the Michigan State Medical Society, Kalamazoo meeting, Sept. 15 and 16, 1909.



tient has gained in weight, that her symptoms have almost disappeared and that she is better in every way. She stopped treatment two months ago.

**Case No. 2.** A patient of Dr. F. E. McClure gives the following history. She is 47 years of age, Para IV, and with the exception that one sister and one brother died of tuberculosis, her family history is negative. For the past five years she has suffered with enlarged thyroid and all the attending symptoms. Her menstrual history is negative. On November 3, 1908, she was operated upon, when a partial thyroidectomy was done. On November 14, 1908, the appendix and a cyst of the right ovary were removed. Both ovaries were found to be small and atrophic. Since the latter operation, the patient suffered with flashes of heat and cold, insomnia, extreme nervousness, etc., all indicative of physiological menopause. On April 3, 1909, treatment was commenced with Ext. Corp. Lutea, gr. V, t.i.d. The patient reported almost immediate relief and on April 14, 1909, she was given Ovarian Residue, gr. V, t. i. d., with no return of the symptoms. On April 20th to May 1st, 1909, neither was given. The patient noticed a slight return of the symptoms on May 3, 1909. Ext. Corp. Lutea again given, gr. V, t.i.d., and immediate relief obtained. A later report (Sept. 6, 1909), from the physician states that this patient considers herself entirely well. The extreme nervousness, together with the other troublesome disturbances of the menopause, has entirely disappeared. She has not taken the extract nor any other medicine since May 15, 1909.

**Case No. 3.** Also a patient of Dr. F. E. McClure. This patient is 48 years of age, married, Para IV, with a negative family history. The patient began to fail mentally 15 years ago and four years ago was operated upon, when both ovaries, tubes and the uterus were re-

moved. The maniacal symptoms were not lessened, but in addition she had all the symptoms of passing through the menopause, only that these symptoms were markedly increased. On September 15, 1908, the patient was given Ext. Corp. Lutea, gr. V, t.i.d., in addition to the usual treatment instituted in these cases. The patient was kept on the extract until March 1, 1909, and is at present (May 1), free from the symptoms incident to the menopause. Her mental condition is also much improved. The physician, under date of Sept. 6, 1909, writes that this patient is doing remarkably well. "She has taken none of the extract, nor any other medical treatment since March 1, 1909. She is in full charge of her household, goes about with her husband socially and her husband insists that she is better than she has been for over fifteen years. Once in a while she will begin in the old way, but will at once go away by herself for about five minutes and when she returns she has regained her self-control. At such times she has been very carefully, but secretly watched, to see if her self-control was the result of her taking any drug or stimulant, but no evidence of that has been discovered. She simply walks about the room and suddenly will throw up her head and straighten out her shoulders, smile and then return to her family. Considering her former state, they are a very happy family and while strict analysis of the values of the different methods used in her treatment are to me impossible, I, personally am inclined to believe that the ovarian extract, and particularly the follicular extract, had a very large part in the improvement."

**Case No. 4.** A patient of Dr. G. E. Chene. She is 41 years old, widow, Para II, with a negative family and menstrual history. She was well up to three years ago, when she began to have symptoms indicative of the physiologic

menopause. These symptoms, such as severe insomnia, various paresthesias, occipital headache, etc., have increased each year. She was given Ext. Corp. Lutea, gr. X, t.i.d. The symptoms were at once relieved. A later report (Sept. 13, 1909) received from the physician in charge of this case, states that the patient is much better while taking the extract. When treatment is stopped, she notices a return of the nervous disturbance, which yields rapidly to a renewal of the treatment.

**Case No. 5.** A patient of Dr. T. A. McGraw, Jr. She is 36 years old, Para II, one abortion at three months nine years ago. Family and menstrual history negative. Eight years ago one ovary (right) was removed. On November 30, 1908, she had an appendectomy, supra-vaginal hysterectomy and resection of the left ovary. A very small piece of the left ovary, apparently healthy, was left in situ. About two and a half months later the patient began to suffer greatly from hot flashes, pain in the back, severe insomnia, extreme nervousness, etc. On February 20, 1909, she was given Ext. Corp. Lutea, gr. V, t.i.d. On February 27, 1909, the treatment was stopped and all the symptoms, which had disappeared under treatment, returned. She was immediately put on the treatment again and the symptoms again disappeared. On March 10, 1909, unbeknown to the patient, she was given Ovarian Residue, gr. V, t.i.d. On March 25th she reported that all the old symptoms had returned and that the medicine seemed to do her no good. She was at once given capsules of Ext. Corp. Lutea, gr. V, t.i.d. This was a dispensary case and she has passed from under the doctor's supervision so that no later report was obtainable.

**Case No. 6.** Also a patient of Dr. T. A. McGraw, Jr. She is 22 years old, married, Para I. Family and menstrual

history negative. On January 2, 1909, a double salpingo-oöphorectomy was performed. Seven weeks after the operation the patient complained of hot flashes and slight nervousness. Given Ext. Corp. Lutea, gr. V, t.i.d. In three weeks she noticed an improvement. One month later she reported that she has been without the capsules for two weeks and that the hot flashes and nervous symptoms had returned. She was given the Ovarian Residue, gr. V, t.i.d. Returned in a week suffering from hot flashes, etc. Treatment with Ext. Corp. Lutea again started. Also a dispensary case and no later report could be obtained, as the patient did not return to the clinic.

**Case No. 7.** An inmate of the Eastern Michigan Asylum is 39 years of age, single, nullipara. Her mother died in the asylum and the patient has been inclined to brood over her condition. Menstrual history practically negative. Some slight attacks of pain in the right inguinal region are the only symptoms. On April 1, 1907, the patient was operated on and both ovaries removed. Soon after, she suffered with flashes of heat and cold, insomnia, pain in the abdomen and lower extremities. On April 24, she was given gr. V, Extract Corpora Lutea, t.i.d. The patient has had less soreness in abdomen, less nervousness, able to sit quietly for longer periods, has an improved appetite, in short, there has been a general improvement. The medical superintendent at the asylum under date of Sept. 6, 1909, writes: "There is little variation in this case. She thinks she is more comfortable while taking this treatment, though she still complains of bodily ailments. We are unable to interest her in matters outside her own physical condition."

**Case No. 8.** Also an inmate of the Eastern Michigan Asylum, is 28 years of age, married Para V, one abortion at two months, three years ago. One



brother insane, otherwise family history is negative. The patient a Russian, was married at the age of 20. Menstrual history negative. Four years ago the patient was operated upon, when, as she says, a double oöphorectomy was performed. Since then she has suffered with occasional flashes of heat, frequent flashes of cold, slight attacks of insomnia, and with little or no pain. On April 28, 1909, the patient was given Ext. Corp. Lutea, gr. V, t. i. d., which treatment she is still taking (May 1, 1909). The physician at the asylum reports that the patient at present feels stronger, says the flashes of heat and cold are less frequent and that she feels more cheerful and better in every way. A later report (Sept. 6, 1909) states that this patient has at last refused to take capsules of Ext. Corp. Lutea. A few days later she was removed from the institution by her husband.

**Case No. 9.** A patient of Dr. H. M. Leach, of Saginaw, is married, a nullipara, with a negative family, personal, and menstrual history. Two and one-half years ago she was operated upon, when the appendix and both ovaries were removed. The patient soon began to suffer with flashes of heat, flashes of cold, insomnia, extreme nervousness and pain in the epigastrium. She was given Ext. Corp. Lutea, gr. V, t. i. d., for two weeks, when she became nauseated and vomited one-half hour after taking the capsule. She stopped taking them and the nausea and vomiting disappeared. The treatment was stopped for a week, when a smaller dose was tried, but the nausea returned so that the treatment was stopped altogether. The doctor reports that the patient's nervous condition was much improved, hot flashes were less frequent and the patient said she felt much better while taking the capsules.

**Case No. 10.** A patient of Dr. T. A. McGraw, Jr., is 37 years old, single,

nullipara, with a negative family history. The patient states that ever since puberty she has suffered with a severe lancinating pain in the region of the right ovary. She has never had a vaginal discharge, no menorrhagia, backache, nor constipation. On January 2, 1908, she was operated upon, when a supra-vaginal hysterectomy and a salpingo-oöphorectomy bilateralis were performed. Soon after the operation the patient began to experience flashes of heat, flashes of cold, insomnia and extreme nervousness. Also suffered from cold sweats at night. She was given Ext. Corp. Lutea, gr. V, t. i. d. Almost immediate relief was obtained. There was an immediate disappearance of the flashes of heat and cold, the insomnia, the extreme nervousness and the cold sweats at night. In fact, she is better in every way. After taking the capsules for five weeks she exhausted her supply and in the few days that she did not take them, she felt the symptoms return, though not so marked as before. A renewal of the treatment caused these distressing symptoms to disappear. This patient is still under treatment.

**Case No. 11.** A patient of Dr. B. R. Schenk is 32 years old, married, nullipara, with a negative family history. The patient reports that she had spinal meningitis at 6 years, some lung trouble at 14 and later at the 19th year. She began to menstruate at 14, has always been irregular, with a scanty discharge lasting usually one day. On April 14, 1909, a hysteromyomectomy and double oöphorectomy were performed. Since the operation, the patient has suffered with flashes of heat, moderate in number and severity. She was given Ext. Corp. Lutea, gr. V, t. i. d., with the result that it kept down the number and severity of the flashes. It must be remembered that the menstrual function was not active before operation. The ovaries were found at the time of operation to be small and sclerotic.



**Case No. 12.** An inmate of St. Joseph's Retreat at Dearborn, is 27 years old, single, nullipara. Her family history discloses that her father died from alcoholism and that her mother is tuberculous and seems to have suffered a mild recurrent psychosis. The patient has apparently been well up to three years ago, when she began to suffer from various phobias. One year later she developed a hysterical aphonia, which is now complete. In February, 1906, she had a double oöphorectomy. Later she developed occasional flashes of heat, frequent flashes of cold, insomnia, and has been extremely nervous. On May 16, 1909, she was given Ext. Corp. Lutea, gr. V, t.i.d. This was continued up to June 8, 1909. After a short interim, the treatment was continued for three weeks in July. On Aug. 25th the dose was increased to ten grains t.i.d. The physician in charge reports as follows: "The patient seems now to occupy herself, is much more hopeful and takes an interest in her surroundings. Walks and moves with less effort and is beginning to make efforts to talk."

**Case No. 13.** Also an inmate of St. Joseph's Retreat at Dearborn, is 35 years of age, single and a nullipara. Her family history unsatisfactory, but apparently negative. The patient was well until her 19th year, when she had an attack of nervous prostration, from which she never fully recovered. Became delirious in October, 1905, and was admitted to the insane hospital July, 1906. At present she is suffering with dementia paranoides. In December, 1905, a double oöphorectomy was performed. Since then she has suffered with occasional hot and cold flashes. Has complained bitterly of extreme nervousness, and of vague pains in the abdomen. She was given Ext. Corp. Lutea, gr. V, t.i.d., on May 16, 1909. This was kept up until June 4, 1909.

Continued three weeks in July and in August, 1909, the dose was increased to gr. X, t.i.d. The physician reports that "the patient is much brighter mentally, occupies herself without urging and intelligently. Takes an interest in her surroundings and said once that she felt as though she were unwell. She fell back to original state immediately the drug was stopped and did not improve when the extract was recommenced. However, she became much brighter immediately the dose was doubled, and has shown consistent improvement up to the present time."

**Case No. 14.** A patient of Dr. A. W. Blain is 34 years old, married, Para VI, with a negative family, personal and menstrual history. In December, 1907, a double salpingo-oöphorectomy was performed. Several months later symptoms of artificial menopause developed. These gradually increased in severity until February, 1909, when the patient was suffering with marked insomnia, flashes of heat and extreme nervousness and was becoming highly despondent. Treatment with Ext. Corp. Lutea, gr. V, t.i.d., was started with almost immediate improvement. The treatment was continued with slight interruptions until August 15, 1909. The patient has increased in weight and a most marked improvement has occurred in her mental state.

**Case No. 15.** Also a patient of Dr. A. W. Blain, is 38 years of age, married, Para IV, with a negative family and menstrual history. The patient states that she received a gonorrheal infection from her husband that necessitated a laporatomy eighteen months later (December, 1907). Both tubes, the right ovary, and the appendix were removed and the left ovary resected at this time. The patient made a good recovery and menstruated normally until March, 1909, when her menses stopped. In July, 1909, the usual disturbances of

the menopause appeared. Treatment with Ext. Corp. Lutea, gr. V, t. i. d., was started with almost immediate improvement and soon the distressing symptoms disappeared. The treatment was stopped, but a slight return of the disturbances a few weeks later necessitated a renewal which caused them to again disappear. The patient has experienced no return now for several weeks.

**Case No. 16.** Another patient of Dr. A. W. Blain. She is 41 years old, married, Para IX, with a negative family, personal and menstrual history. Her menses diminished gradually and have been absent since April, 1909. In August, 1909, the usual disturbances of the menopause appeared. She was given Ext. Corp. Lutea, gr. V, t. i. d. The disturbances were very much modified, but not entirely relieved. She is able, however, to do her housework, which was impossible before treatment was instituted.

**Case No. 17.** A patient of Dr. A. W. Blain, is 49 years old, married, Para I, has never menstruated regularly. Her menses ceased and the usual disturbances incident to the change of life developed last spring. Treatment with Ext. Corp. Lutea was begun in July. There was no improvement in this case.

**Case No. 18.** Also one of Dr. A. W. Blain's patients. She is 44 years of age, married, Para II, and has always suf-

fered with pelvic and menstrual disorders. In March, 1909, the menopause was ushered in with the usual annoying disturbances. Treatment was commenced on May 18, 1909, by giving Ext. Corp. Lutea, gr. V, t. i. d. Considerable improvement followed, the cold flashes disappeared, but the patient did not improve much mentally. She has not been seen since last June.

A hasty resumé of the above 18 cases will show that 14 suffered from disturbances of operative or artificial, and four from those of natural or physiologic menopause. Of these 18 cases, 5 were cured, 12 were improved and one obtained no relief. Included in the 12 cases that were improved are grouped those still under treatment. A few of these latter may be permanently cured. While the results obtained in so small a group of cases do not warrant the drawing of any definite conclusions, still the results are favorable enough to justify a continuance of the treatment in other cases, where there is a disturbance incident to artificial or physiologic menopause. If any of you present have a case or cases which you deem favorable for treatment with ovarian extract or extract of the corpus luteum, it will be supplied you. It is only from a large number of cases that accurate and definite conclusions can be drawn.

202 Fine Arts Building.

Operation for cancer of the stomach after the diagnosis has been made by the presence of a palpable tumor can not be hoped to be curative. The hopeful cases are those in which diagnosis is made through an exploratory opening which may be made under cocaine and only large enough to admit the finger.—*Am. J. Surg.*

Remember that a syphilitic mucous patch comes quickly, not slowly; it is soft, not indurated; it remains but a short time, not persistently; it is preceded or followed by other mucous patches, and it is apt to be associated with other signs of syphilis.—*Am. J. Surg.*

## THE PRESENT STATUS OF STOMACH LAVAGE\*

CHARLES D. AARON, M.D.,

Detroit

For many years emetics were employed for the removal of the contents of the stomach, but of late, lavage has come into current use. For the idea of washing out the stomach we are indebted to Kussmaul, of Heidelberg. His results proved so fruitful that this new therapeutic measure was soon adopted by the medical profession, and for several years it has been the favorite treatment in gastric affections.

The practitioner was at once won over by the simplicity of lavage, for the stomach is a receptacle which may be washed out as often as desired, and can easily be kept clean. From knowledge of the fact that when food stagnates and ferments in the stomach, the patient experiences marked improvement after this treatment, the conviction has gained ground that it is the best means for treating all affections of the stomach, whatever their cause or nature may be. Practitioners ceased to trouble themselves about differential diagnoses, and applied lavage of the stomach in every case of digestive disorder. As is usually the case when a new and apparently successful therapeutic agent is in fashion, it was used indiscriminately. For thirty years there were no precise rules for guidance in this treatment. However, the reaction has now set in, and many modern authors point out the ill effects to which the abuse of this treatment gives rise, and define its indications and counterindications. If the physiology of gastric function had been better

known, probably these indications could have been established more readily. But during the period referred to, which extended from 1870 to 1895, nothing but the chemic action of the gastric juice received attention. Lavage of the stomach seemed to be the best means for modifying and counteracting functional changes. Only when it was learned that the mechanical function played the principal rôle in digestion, could the indications for irrigation be more precisely determined.

As an example, I may cite the case of a patient whose pylorus was occluded by cicatrices of an ulcer, and from whose stomach we sometimes removed one or two quarts of very acid contents. If a stomach of this description is emptied and washed, the patient feels considerable improvement and it would appear that methodically continued irrigation would ultimately cure him. Of course, we know that this is misleading. The stomach continues to retain the ingested food, because the pylorus is occluded and will not open except by surgical intervention. And yet it was for cases like this that the illusive hopes of cure by lavage were entertained.

The idea should have suggested itself that lavage of the stomach is a procedure opposed to nature, because it interferes with the normal course of the food; the chyme prepared in the stomach ought to pass through the pylorus in order to undergo transformation in the intestine so as to be absorbed. Serviceable stomach lavage should drive

\*Read before the Michigan State Medical Society, Kalamazoo Meeting, Sept. 15 and 16, 1909.



the contents of the stomach into the duodenum as rapidly and completely as possible, for this is its natural channel; whereas in the case of a pyloric stenosis the digestive work of the stomach is not only retarded but the stomach cannot empty itself. Even if the pylorus is patulous, too long continued irrigation may cause an exhaustion of the gastric juice and tend to dechloridize the blood serum. These considerations demand caution in the employment of lavage of the stomach.

We have often seen how enormous quantities of water were introduced, even up to the maximum the stomach could endure. This brutal manner of washing the stomach is totally opposed to the physiology of deglutition which we ought to take into consideration in the application of lavage. It may require years for such an over-distended stomach to regain its normal tonicity. The practitioner endeavoring to give relief to his patients suffering from diseases of the stomach has made it a routine practice to wash out the stomach. There is no question in my mind but that this is conducive to a great deal of harm. Many patients are placed in a condition from which they never make a recovery and, if they recover it is usually only after a long and tedious time. When the musculature of the stomach is weakened and relaxed, we have a condition known as atony of the stomach. Atony of the stomach is a condition which accompanies many diseases. It is found in many patients who have been reduced in strength. We find it in diseases of the lung, heart, liver, kidney, besides in the diseases of the digestive organs. Where the stomach is relaxed, there is usually an atrophy and fatty degeneration of some of the muscle fibres, and the introduction of water may lead to a dilatation. Just as soon as the muscle fibre of the stomach is distended by the water, the motor func-

tion is temporarily retarded, and the stomach does not empty its contents into the intestine. Food, eaten while the stomach is in this condition, stretches the stomach by its weight, interferes with motility, and thus prevents the muscle from retaining its normal elasticity. So an atonic condition difficult to overcome is brought about. The muscle layers become thin and the muscularis is reduced to isolated bunches of muscle fibres, a condition which leads to dilatation.

Let us now examine the manner in which nature empties the stomach by vomiting. Aside from those cases where it is produced by reflex action, vomiting occurs, in the majority of intoxications, either by direct irritation of the gastric mucous membrane or more particularly by irritation of the vomiting center in the medulla. Any obstacle which interferes with the free passage of the food in any given part of the alimentary tract may produce vomiting. In cases of poisoning the poison is in part eliminated through the gastric juice, regardless of the way in which it was administered. Nearly one-half the quantity of morphin injected subcutaneously is found in the stomach as early as half an hour after injections, and the same effect may be observed with many organic or inorganic toxic substances. In uremic patients a strongly ammoniacal fluid is present in the stomach, the composition of it being similar to that of urine, and vomiting is of constant occurrence. Urea is often eliminated through the stomach. Vomiting is, therefore, a measure of defense against intoxications on the part of the organism, and shows that we can considerably assist nature by lavage of the stomach. Experience has, therefore, taught us the great usefulness of lavage in most cases of intoxication and auto-intoxication. It is of great benefit in the vomiting of pa-

tients suffering from uremia and eclampsia, and in urinary intoxications generally.

In gastric retention, owing to a stenosis of the pylorus, the stomach becomes very tolerant, and some patients do not eject the contents of the stomach more than once in twenty-four hours. In these cases lavage of the stomach is merely of temporary and transient value, the only logical intervention being surgical.

It will be seen, therefore, that the only serious indication for lavage of the stomach is in intoxications, or in cases where it is desirable to rapidly empty and cleanse the stomach. It will be most frequently employed as a symptomatic procedure, which, while acting as an adjuvant to the general treatment, has no curative action of its own. In treating certain affections of the stomach I rarely employ lavage. Occasionally the mere mention of the washing out of the stomach with a long tube has a beneficial effect on nervous patients. Sometimes the mere threat of employing this treatment is sufficient to cause a goodly number of the symptoms to disappear, such as anorexia, eructations, vomiting, etc.

Are there cases in which for diagnostic purposes the introduction of a soft rubber tube into the stomach should be avoided? Most, if not all authors, object to the employment of this measure in the presence of ulcerative conditions of the gastric mucosa, and more particularly where there is hemorrhage. Boas considers it even necessary to allow after hemorrhage three or four weeks to elapse before irrigation may be recommenced. The other contraindications are cardiac affections, aneurysm of the aorta, advanced arteriosclerosis, cachexia, old age, pregnancy, etc. In some cases I do not even see the necessity of examining the stomach contents, for instance, in the presence of

a mitral insufficiency, when we know that the dyspepsia in these patients is due to functional insufficiency of the circulatory apparatus, causing a venous engorgement in the gastric mucosa. We know that digitalis or strophanthus has a better curative effect in such cases. The rational employment of a stomach tube for a distinct purpose must be left to the discretion of the physician who must weigh in each individual case the advantages against the disadvantages.

I have used the stomach tube for diagnostic purposes in old people, without feeling uneasy about the theoretical contraindications enumerated with much detail in the text books; but in each case I have given due weight to the question whether the procedure was one of absolute necessity.

Now, what is usually done when a stomach is being washed out? Even the most conservative are not afraid of introducing quantities varying from a pint to a quart of water, and more, in one injection. This practice is not to be commended, for it is frequently followed by a sagging and dilatation of the organ it was intended to cure. Therefore, if we are to wash the stomach, let us imitate nature and introduce frequent, but small quantities for irrigation purposes; generally speaking, a few ounces in one application, and this quantity may be abruptly poured in without causing any alarming reaction. After each injection the attempt is made to empty the stomach, by requesting the patient to bear down with his abdominal muscles, at the same time holding his breath and closing the glottis. In this way the stomach can be emptied and completely cleansed in four or five applications, even when there is considerable retention.

In order to effect the emptying of the stomach, as soon as sufficient fluid has passed into the stomach, it is recommended that the funnel be lowered, thus

creating a syphon action. The majority of authors declare that it is the syphon action which empties the stomach, but the stomach cannot empty itself by the mere action of the column of water that remains in the rubber tube. The flow of the fluid can take place only when aided by the pressure of the abdominal muscles, the diaphragm and the stomach itself. For this reason it is not necessary to lower the funnel as in true syphonage, but simply to detach the glass joint connecting the rubber tube, and to allow the fluid to escape from the free end of the stomach tube. It is, therefore, unnecessary to fill the stomach with one or five pints of water in order to effect a complete cleansing. And yet some modern text books recommend these large quantities of water, which, in our opinion, are unnecessary and do more harm than good.

You will have observed from what we have said that aside from intoxications where irrigation of the stomach may effect a cure, it may also be usefully employed in stenosis of the pylorus, pending surgical intervention. Where there is no question of intoxication or of more or less complete occlusion of the pylorus, we have a method of auto-lavage, without the use of the stomach tube, which gives very good results. But in order to be quite successful, a fair portion of the pylorus should still be in properly functioning and elastic condition. This condition is present in a large percentage of patients who complain of indigestion from relatively unimportant causes. Such patients are very numerous. They ingest food and beverages in excess and become sooner or later candidates for nephritis, hepatitis, arteriosclerosis, rheumatism, etc.; and in the course of their carousals they are obliged to invoke the aid of a physician to relieve their fatigued organs. Auto-lavage is a form of stomach irrigation, which has been called physiologic in

order to distinguish it from the kind we have spoken of before; for here the use of the stomach tube is not necessary. It is sufficient that the patient drink four to eight ounces of the irrigation fluid and then lie down on his abdomen supported on a somewhat hard resisting surface, across the bed or on the floor. In this position let him breathe as deeply as possible. Fifteen to twenty deep respirations are sufficient to drive the contents of the stomach through the pylorus. This procedure may be repeated as often as necessary. As a rule, the patient may rest on the abdomen for five minutes, taking from time to time a number of deep respirations. It has been proved that in this way the stomach may be cleansed quite as effectively as by the introduction of the stomach tube, provided always that the pylorus is not occluded. This method has a considerable advantage over the other, for by it the nourishment, as prepared by the stomach, is not lost and follows the physiologic path. Besides, the patient will submit much more readily to it than to the manipulation of the stomach tube. In order to obtain the maximum effect from this method of auto-lavage, we must strive by all means at our command to free the pylorus from all obstacles that interfere with its proper function. This is partly achieved by administering the fluid lukewarm.

We know that hydrochloric acid, especially if it exceeds the physiologic concentration, has the effect of contracting the pylorus more energetically, producing a spasm. When this acid is found in excess, it should be neutralized as much as possible by means of a suitable alkaline solution. Bicarbonate of soda, for instance, should never be given in a more concentrated solution than 1:100. This solution is administered in doses of from six to eight ounces, and the procedure is as we have



just described. The alkaline solution favors intestinal digestion which requires a slightly alkaline medium to reach the maximum intensity.

The question which is frequently asked as to what is the proper time for irrigation of the stomach is easily answered; it depends on the composition and quantity of the last meal the patient has ingested. Thus, we know that a mid-day meal, consisting of normal quantities of meat, farinaceous or vegetable food, bread and fruit, will have been digested and will almost entirely have left the stomach in about six

hours. If by that time the stomach is not emptied, the methods described may be proceeded with. By autolavage the organism is not deprived of a particle of the ingested food, nor the stomach of its digestive juice. Therefore, autolavage may be applied two or three hours after a light breakfast, four or five hours after the midday meal or evening meal, and sometimes also in the morning before breakfast. In this way the stomach will be effectively cleansed after each period of digestive work.

### Discussion

**E. L. Eggleston**, Battle Creek, said that he seldom uses the stomach tube except for diagnosis. Continued lavage in cicatricial stenosis of the pylorus does no good and allows the patient to lose in strength and weight until the favorable time for operation has passed. Numerous atonic conditions of the stomach, secondary to a more general disorder, are relieved by lavage, and this procedure is permissible in connection with other measures designed to cure the general disorder. He has not been successful with auto-lavage, because he has found that many patients overdid it and accomplished more harm than good. Patients with gastric atony, who can eat only two meals a day, are sometimes afflicted with distress and restlessness at night, owing to the residue still in the stomach; in such cases it is good practice to withdraw the contents before retiring. Nausea is also a good guide to the use of the tube.

**Frank Smithies**, Ann Arbor, did not agree with Dr. Aaron that large quantities of fluid in lavage were harmful. In an extensive use of the tube he has found that large amounts may be necessary, and can be used with advantage, provided that the natural limit of capacity be observed, and the fluid not allowed to remain. It is a common experience to find that small quantities of fluid only partially cleanse the stomach, especially in hour-glass and dilated stomachs, and that important diagnostic material may not be drawn from the cavity. Lavage as a therapeutic measure should not be used until an absolute diagnosis reveals whether or not it is

indicated. Auto-lavage has not been successful in his hands.

**B. A. Shepard**, Plainwell: I want to emphasize the point brought out with regard to the use of the stomach pump in neurotic cases. It is sometimes amusing to see the mental effect of leaving a stomach pump in the room. I have known of several patients who had had excessive vomiting for several weeks having been cured simply by the physician exhibiting the stomach pump in the sick-room; or by washing out the stomach of neurotics when the stomach was involved. Auto-lavage is important. Its effects are the stimulation of the musculature of the stomach forcing the contents into the bowel.

**Johann Flinterman**, Detroit: Many cases of dilatation of the stomach after surgical operations can be relieved by lavage. I have applied it in cases of ileum, in which there was fecal vomiting, and in which after the application of the stomach tube relief was afforded. Again, the symptoms of strangulation in cases of hernia are sometimes relieved by lavage. It is a valuable remedy in actual dilatation of the stomach, as well as in cases of strangulated hernia or intestinal incarceration, or obstruction in which operation is sometimes refused.

**Charles D. Aaron**, Detroit: If a patient, who has stenosis of the pylorus and is not improving but constantly losing weight, is not referred to a surgeon for operation, we are likely to lose him. I cannot agree with Doctor Smithies in using large quantities of water in cases of dilatation of the stomach. In dilatation the stom-

ach is so stretched that there is an atrophy and fatty degeneration of some of the muscle fibers. Large quantities of water introduced at this time increase the dilatation and may so overstretch the musculature that it will do a great deal of harm. In these cases one will usually find a pint or more fluid in the stomach to begin with. After this has been removed six to eight ounces of

water at a time have been found to be amply sufficient. Doctor Flinterman's remarks on acute dilatation are well taken. It is the only method we have of bringing about recovery in cases of acute dilatation of the stomach following operations. Even then there is a transudation of liquid elements from the blood into the stomach and it is necessary at first to remove this liquid before washing out the stomach.

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## DANGER IN "INTERVAL" APPENDECTOMIES\*

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W. H. HAUGHEY, M.D.,

Battle Creek

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Late in December Miss M., yet in her teens, suffered an attack of appendicitis. After about three weeks I saw her in consultation. The acute symptoms had subsided. Some elevation of temperature remained. Pulse accelerated. A well-defined, large, painful tumor completely filled the right iliac fossa. Patient up, dressed, and around the house. A short time later a change was made in medical attendant and I saw her no more until April following. She was then apparently well. Walked and rode out; was cheerful and happy. She came to the hospital, walked to her room and visited around the halls with her acquaintances; went unaided to the preparation room; and the next day came to the operating table where an interval appendectomy was done. The tumor in the iliac fossa was still palpable.

Much difficulty was experienced and considerable time consumed in locating the appendix and separating it from the surrounding adhesions. Within thirty-six hours evidence of septicemia began to appear. In about one week she was

dead.

**Case No. 2.** About one year later Miss C., also in her teens, underwent an interval appendectomy, followed in a few days by death. I never saw this case professionally and do not know the history. I believe, however, that she had been out some days before the operation was done.

The interval is universally recommended as the safest and best time for operation. But is it? In acute recurrent catarrhal appendicitis without rupture and with little or no extension of infection beyond the appendix, the interval operation is sage and simple. In other forms where rupture has taken place and infection has gone beyond the walls of the appendix, but where adhesions and protective defenses have circumscribed and kept the infection within an area compatible with life, and the period known as the interval has arrived, the question of operation at that time should receive far more careful consideration than I fear has always been accorded to it. If the operation is done while there is yet, within the area circumscribed by adhesions and defenses,

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\*Read before the Michigan State Medical Society, Lamazoo meeting, Sept. 15 and 16, 1909.

virulent active germs and toxins, there is great danger that some may be liberated and by means of the slight endothelial abrasions and trauma incident to the operation find access to the general circulation in sufficient numbers or quantities to set up a general septicemia from which death in a few days, will follow.

When the leucocytes and serums have fought the battle and securely imprisoned within impregnable walls an enemy they could not destroy, they have effectually secured the system against further attack from the enemy; their services are now no longer required; they are therefore withdrawn from the scene of conflict, discharged, and mustered out.

If meddlesome surgery now liberates the prisoners, they will come from their confinement into a clear field where, meeting with nothing like adequate opposition, they at once enter the blood and lymph streams carrying death and destruction to all parts of the body in the form of a general septic infection which terminates fatally to the patient in from six to eight days.

My plea is: If we must do interval appendectomies *let us wait for the interval.*

*Never operate while a tumor is present unless sure that enough time has elapsed to render the contents of the cyst or mass sterile.*

The highly skilled surgeon may indeed operate with comparative safety to his patient in the presence of virulent, active infection; but the risk is tremendous and the danger great. He, knowing this, must indeed be confident of his skill who can justify himself for deliberately subjecting his patient to this awful risk, unless under the most desperate circumstances, a situation I am unable to imagine in connection with interval appendectomies.

Literally the interval in suppurative forms of appendicitis does not begin until all the germs and toxins are destroyed and the contents of the cyst or mass has become sterile. Before that time arrives the patient is in a condition of delayed recovery. The germs and toxins are imprisoned with every source of nourishment effectually cut off. But until their activity is destroyed the case is one of delayed recovery. The interval only begins when sterilization is complete. When such a distinction is generally observed, there will be less danger in "interval" appendectomies.

**Alcohol Injections in Neuralgias, Especially in Tic Douloureux.**—Kiliani, of New York, bases his estimate of the value of injections of alcohol in neuralgia on an experience with 190 cases treated by him. The injections of alcohol are made into the foramina from which the various nerves take exit, 80 per cent. alcohol being used. Out of the 190 cases treated there were five failures to relieve the pain. The relief is immediate and wonderful to the patient, and lasts for a variable time. When pain recurs it may be relieved by a new injection. From one to four

cubic centimeters of alcohol are injected at a time. There are several possible but rare complications of the operation, such as oculomotor and facial paralysis, and sloughing of portions of skin. Convulsive tic is less well affected on account of the possibility of getting true paralysis. In sciatica good results are obtained by injecting over the nerve branches. In 42 per cent. of the cases injected there has been no return of pain. This is a safe and reliable method of giving relief to an agonizing ailment.—*Medical Record* June 5, 1909.



## SARCOMA OF THE ULNA\*

H. E. RANDALL, M.D.,

Flint.

The types of the tumors involving primarily the long bones, are the osteomata, the fibromata, the chondromata, the sarcomata, and the rare myelomata. Carcinoma is secondary or a metastasis of a cancer of other tissue than bone. The older literature has many cases of primary cancer which at the present time are considered as metastatic hypernephromata, and many of the so-called endotheliomata probably are also of this class of tumors. This brings up the question whether a simple adenoma may not contain a microscopic malignant tumor.

There are a number of other growths of the osseous tissues which are hardly to be included among the tumors of the long bones, such as the osteophytes, hyperostoses, and exostoses, due to irritation or injury or the rare condition known as myositis ossificans. Tubercular and syphilitic diseases in the presence of a tumor of a long bone must first be excluded.

A pure type of a tumor is very rare; usually a combination of two or more types exists. Bone cysts in relation to tumors of bone should be considered as a degeneration of a pre-existing tumor. Virchow taught this in 1876, and it is accepted today that degeneration of a chondroma from a misplaced epiphyseal cartilage explains most of the bone cysts. However, cyst of bone may occur from other causes, as dermoids. It has been thought that some cases of bone cysts represent the entire destruc-

tion of sarcomata. The blood cyst of a central giant-celled sarcoma represents such degeneration in a most marked form.

It would seem that malignant tumors of bone differ greatly in malignancy. Bloodgood has shown that in certain types of sarcoma (the giant-celled sarcoma) curretting alone may be sufficient, while in other types even early high amputation does not save the patient, because of the early metastases in the lung. Cooley has collected about one hundred cases of sarcoma in which amputation failed to give a cure. Wyeth suggested that in view of the better results obtained by the older surgeons, represented by Gross, and in which sepsis was the rule, that the amputation stump be infected at the time of operation.

The results obtained by Bloodgood in doing a more conservative operation, unless the function of the limb would be lost in so doing, indicate that in selected cases the limb and good functional results can be preserved by doing less radical work. In over 100 cases of giant-celled sarcoma Bloodgood found that no metastases had taken place. These cases had been treated by curretting, resection, or by amputation. In some cases a secondary operation was necessary for the local recurrence. He shows that the giant-celled sarcoma may be subjected to curretting, or chiselling, if the shell of the bone is so thick that it is possible to get a clean surface. If the shell of the bone is thin, a sub-periosteal resection is performed. When the surrounding muscles are involved in the giant-

\*Read before the Surgical Section of the Michigan State Medical Society, Kalamazoo Meeting, Sept. 15 and 16, 1909.

celled sarcoma, total resection is indicated. In the periosteal fibroma and osteo-sarcoma resection is advised.

It might be well at this point to mention that an error in diagnosis that has occurred is to mistake an inflammatory condition for a small-celled sarcoma. Multiple myeloma is incurable, and to avoid operating on these cases, the urine should be examined for the Bence-Jones reaction. This albuminous body is not constantly in the urine, but will be found at some time during the course of the disease. The X-ray will detect other tumors when it is thought that only one tumor is present. Surgery in multiple myeloma is not called for unless it be to relieve symptoms. These cases die in from two months to two years uninfluenced by treatment.

The treatment of sarcoma is by early and complete removal. If possible a piece of the tumor is snipped out for microscopical examination. The X-ray should be used in every case of a bone tumor by an expert radiographer. If the sarcoma is of the giant-cell type a conservative operation may be done. If a diagnosis is made, an early removal of the sarcoma and the bone to which it is attached is done, even in the more malignant types. I wish to emphasize the point that the diagnosis must be early when the growth is small.

The case which I report is of the most malignant type of sarcoma, namely a spindle and round celled sarcoma of the upper part of the ulna. The reason for the removal of the entire ulna is that frequently there are metastases of tumor cells throughout the bone, sometimes several inches from the original site. This young man was anxious to save the arm, although he had been strongly advised by two excellent surgeons to have an amputation at the shoulder. The growth was at the upper end of the ulna. A former attempt had been made to remove the growth, but it had re-

curred when I first saw him. I asked Dr. P. M. Hickey to make a microscopical examination, and he reported that the growth was a spindle and round celled sarcoma. Dr. Bloodgood, to whom I recently sent a specimen, confirmed the diagnosis.

After having decided to try a less radical operation than amputation, a search of text-books and surgical literature failed to find a technique for the removal of the ulna, so it was removed by the following method: An incision was made from the olecranon process down to the styloid process of the ulna. This incision was down to the ulna in its entire length. Another incision taking in the growth and some of the surrounding tissues made made, joining the other incision. By keeping the point of the knife close to the bone, the ulna was dissected out. This incision avoided the ulnar nerve which crosses between the inner condyle and the olecranon process. The head of the radius was held in place by bringing the fascia around the head of the bone. The functional result after the operation was so good that he was able to do all kinds of farm work; pitching hay, milking, etc. There was no recurrence of the growth up to the time he died, nearly two years after the operation, of acute poliomyelitis during an epidemic in this vicinity which has been reported by Dr. Manwaring in the April number of the *Journal of the Michigan State Medical Society*.

From the result obtained in this case, I believe that, in cases of spindle and round-celled sarcoma diagnosed early, complete removal of the bone and its tumor is sufficiently radical treatment, and may save the patient from the severe mutilation and disablement of high amputation. This can be done where the tumor involves either of the bones of the fore-arm. If the tumor is of the fibula the same procedure can be used. The experience of Nichols in eleven cases

of destruction of the shaft of the tibia, reported in the *Journal of the American Medical Association*, and the case of Huntington reported in *Annals of Surgery*, of destruction of the tibia by osteomyelitis, and in which the fibula was transferred, show that the fibula will in

time enlarge to the size of the tibia.

It will be only in selected early cases that this can be done, and in the case of the tibia only where all conditions permit of the long time necessary for the fibula to enlarge to the size of the tibia.

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**Puerperal Convalescence.**—In the *Interstate Journal*, Dr. Frank Hinchey of St. Louis has a paper on rest after labor, which he thus concludes:

1. Early rising is beneficial because the lying-down position reverses the normal curve of the utero-cervical canal, conducing to subinvolution and to retro-deviation of the uterus, consequent upon the inability to secure uniform anemia and atrophy of that organ.

2. In the early days after labor, there is an absence of unusual tension of the pelvic floor, in the upright posture, because the uterus rests upon the pubis.

3. Exercise favors involution of the pelvic-floor structures, so that by the time the uterus has reached the pelvis, these structures can afford the necessary aid to the internal uterine supports, thus preventing prolapsus.

4. Hemorrhage and embolism are not to be feared.

5. Early rising affords drainage which may prevent infection.

6. General metabolism is often impaired by prolonged rest to such a degree that lactation is inhibited and any tendency to invalidism is encouraged.

In the same *Journal*, Dr. Geo. Gellhorn offers some conclusions which indicate that doctors will differ on this as on many other matters. Hear him:

1. According to my statistics, out of 291 mothers with gynecologic ailments, 156 were sick ever since they had given birth to a child.

2. In the overwhelming majority of these cases, the origin of their ailments could be traced back to a faulty management of the puerperium.

3. In a well directed puerperium prophylaxis must be considered first and foremost.

4. The object of obstetrics is not merely to deliver a living child, but also to restore the mother to perfect health.

5. My own remarks have been limited to a few points of prophylaxis on which a consensus of opinion has not yet been achieved.

6. I maintain that a puerpera should stay in bed not less than eighteen days.

7. Every puerpera should wear an appropriate bandage.

8. The model described by Seimelink appears to me most advisable.

9. Mild methodical exercises started in the second week after confinement, and continued for several weeks after patient has left the bed, are indispensable to a complete restoration.

10. Every puerpera should be examined carefully six weeks post partum before she should be discharged from medical observation.

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**Hogs and Children.**—Congress has been asked this year for an appropriation of three thousand dollars for the employment of an expert in the welfare of children. It was hoped by those who made the request that this modest beginning would lead to an efficient bureau of the Department of the Interior which would eventually deal with a wide range of questions affecting school children.

In support of this request a Nebraska woman wrote that her husband was engaged in raising hogs while she was trying to raise a boy. Her husband, she said, had no difficulty in getting efficient and expensive aid from the government in his hog-raising pursuits, but she had to struggle along in her own way with the boy question. With a pardonable mother's prejudice, she argued that the welfare of her boy seemed almost as important as the health and happiness of her husband's hogs.—*Iowa Health Bulletin*.



## The Journal of the Michigan State Medical Society

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to B. R. Schenck, M. D., Editor, 502 Washington Arcade, Detroit, Mich.

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NOVEMBER

### Editorial

If it be at all possible to ennoble mankind, it will be through medicine—Descartes.



A Medical Building for the Wayne County Medical Society is again being agitated, and judging from the interest and enthusiasm which a number of the members are displaying, a beginning at least will have been made before the end of the society year. The president is giving up much time to a discussion of ways and means, and if he is loyally supported by a sufficient number of the more influential members, we feel sure that some scheme of financing the project will be worked out. It is an opportunity to increase the efficiency of the Detroit profession. It is an opportunity to write Holmes into the medical history of Michigan.

Coupled with the medical home will undoubtedly be a medical library. The argument that one is needed in Detroit requires no champion. It is conceded by all. The lack of it is retarding the progress of medicine in the city and unless the profession is provided with better facilities (there are now next to none) before many years, we must face the discouraging spectacle of being left behind our colleagues located in more progressive cities. Why should Buffalo have an excellent library, Cleveland even

a better one, and Detroit have none? Is it because we are less wide-awake, or is it because no leader has until now appeared to make this his life work? Why is it that the Elks and the Moose and the Eagles and the Owls put up magnificent buildings while the doctors must meet in an illy ventilated room through the courtesy of the county officials, and suffer from the lack of efficient accommodations? It is time to change all this, and Holmes is the man to do it.



The Board of Health Report for the City of Detroit, for the year ending June 30th, 1909, is an interesting commentary upon the conscientious endeavors of able executives and the parsimony of the financial arbiters of the city. Here is an able and industrious body of men, gathered about Dr. Kiefer, striving to carry out modern ideas concerning public health in a city of over 400,000 inhabitants, with appropriations of money sufficient only for a city half the size. It is difficult to locate the blame for such conditions—probably it rests in no single place. Requests for funds made by the Board of Health are adequate, they are presented with proper argument, and supported with vigilant insistence, but they are mercilessly pared by councilors or estimators, or both. Yet these officials are probably aware of the undesirability of such economy, and they realize the needs of the health department, as they realize the needs of many other departments of the city, making demands on the public treasury. Yet they must be controlled by the available moneys; they are the guardians of the taxes, endeavoring to prevent deficits from year to year.

To the thoughtful physician and the student of vital statistics, the fact is familiar that the future of American city life, development, and permanence de-

pend more upon proper sanitary conditions than upon any other factor, and hence the appropriations therefor should be inviolate, because they are supreme in importance. But the Board of Public Works, the Street Commissioner, the Park Commissioner, and other departmental officials have no less sincere and exalted conceptions of the importance of their own work, which unfortunately is usually more conspicuous to the average citizen. Every one is ambitious for good streets, fine parks, and beautiful buildings, because he has always been taught that such things were the highest ambition of a city. These are the subjects that the public press agitates, and that visitors admire. But the work assumed by a board of health is unobtrusive, inconspicuous, it leads into devious by-ways of life, and burrows beneath the ordinary planes of observation; the public have been ignorant of it, and regard its sporadic champions as cranks. For instance, the proposal to build a contagious disease hospital on an accessible site met with a storm of protest that was medieval in its reasons—and, unfortunately, supported by medical men of repute. The storm was weathered, but the ship was so battered as to seek smoother waters. In short, the public does not realize the work that devolves upon a Board of Health, nor does it conceive of its importance.

The councilmen and estimators owe their positions to the voters; they know the sentiments of their constituents, and are naturally ruled by them. The sentiments of the voter are ruled by his education, which is deficient in matters of his own or the public health. It is sufficient for him that in case of his own illness he can buy patent medicine at the drug store or consult an osteopath, Christian-scientist, herb-doctor, quack, optometrist, or perhaps a real physician. What more attention need be paid to health?

This attitude of many citizens is not surprising; furthermore we may expect it to continue, and to continue to limit sanitary work, until it is supplanted by true knowledge. The responsibility for establishing this knowledge rests upon the medical profession; they are the only possible teachers, they are the ones most interested, and they the ones who cavil most bitterly at civic ignorance and official parsimony. It is the fault of physicians themselves who do not sufficiently keep their own science in the public eye, not the startling feat of personal skill, which savors of flagrant advertising, but the narrative of medical progress, the sanitary needs of the individual and the community. The public needs and eagerly devours palatable instruction on medical subjects; the articles by Woods Hutchinson are admirable in scope and effect. There ought to be other men who will imitate such a pioneer. The public lectures in Boston are worthy of imitation, and other means are at hand. Similar movements ought to be begun everywhere, in order to create the proper civic conscience, and until they *are* begun, conditions will hardly improve. *It is up to the doctor.*



**The influence of milk on morbidity and mortality** furnishes a striking example of the potency for evil of a thing designed for the accomplishment of good. The food of the artificially fed infant, and the most important food of the sick and the aged become too often promoters of disease and instruments of death.

Health may be influenced by cow's milk, either because the milk is physiologically unsuitable or because it has become a medium of infection. Milk of inferior nutritive value cannot be without its effect on the health of the consumer, especially when used as a food

for babies. Infected milk is known to be one of the most potent causes of diarrhoeal diseases among infants as well as an important carrier of tuberculosis, typhoid fever, scarlet fever and diphtheria infection.

The influence of impure milk on the duration of sickness, and on the death rate when milk is employed as an invalid diet is difficult to demonstrate. For the sick, milk, usually cooked milk, is often the principal or exclusive article of diet. Considering the increased susceptibility of feeble and aged persons to infection and the diminished resistance offered by the sick, there can be no doubt that the contamination of milk is a factor that plays a considerable part in keeping up the rate of sickness and death. This malign influence of impure milk or milk improperly used is made evident by the mournful proofs of extensive and growing statistics on the subject.

Is it not our duty then as physicians who know the dangers of impure milk, to educate our patients in regard to these facts and make it possible for them to obtain a safe product? We should begin this crusade by giving our active support to improvement of the general milk supply and the means of obtaining a special clinical milk, i. e., certified milk.



**County Society Bulletins**, designed to frequently bring to the attention of the members the work of the societies, are growing in favor and if consistently followed out, cannot fail to be a great factor in creating interest. The Kent County Society has been publishing a very creditable sheet and at the end of the first year of the trial, finds that it has been an unqualified success. Wayne county formerly published a monthly bulletin, but this year a weekly an-

nouncement, containing the program and items of interest, is being sent to all the physicians of the city. The latest bulletin to appear is that of the Third Councilor District. This will contain the programs of the Branch, Calhoun, Eaton and St. Joseph Societies and the Battle Creek Medical Club. The editor says:

"The wider circulation of the program will, we hope, increase the attendance at the meetings, by giving every member in the District a chance and an invitation to attend. Also it may stimulate the essayists to better efforts, because of the larger audiences."

The larger societies elsewhere in the state would do well to adopt this method of keeping their members in touch with what is going on.



**A new department** will be found in this issue. It is established to meet the demand of our members from the western part of the state, and was planned by the Chairman of the Council and the Secretary of the Kent County Medical Society. Some of our most important county societies are located in this section of the state, and it is hoped by having a special section of the Journal devoted to their interests, to more fully report the local news, both official and personal, than has been done in the past. Articles of interest are solicited by Doctor Warnshuis, who will have charge of the department. We want the little things as well as the more important.

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## Book Notices

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**Text-Book of Gynecological Diagnosis.** By George Winter, M. D., and Carl Ruge, M. D. Edited by John G. Clark Professor of Gynecology University of Pennsylvania. After the third, revised German edition; 670 pages; 316 illustrations, many of which are colored; cloth, \$6.00. J. B. Lippincott Company, Philadelphia, 1909.

Among the younger gynecologists of Germany,



no one occupies a more representative position as a teacher than Professor Winter, first in the University of Berlin and now at Königsberg. Some thirteen years ago he wrote his gynecological diagnosis, a work so replete with practical diagnostic points that it was at once accepted as an authority on the subject. Ruge, of Berlin, than whom there is no greater in gynecological pathology, contributed the laboratory methods. This year the third edition of the German work appeared. The English reading profession owes Clark, the American editor, a debt of gratitude for bringing out the present translation, and the publishers have done well in reproducing all of the original illustrations. Dr. Clark has added, here and there, notes which adapt the text to American practice. They are a distinct addition to the original text.

The text is divided into three parts: General Diagnosis, Special Diagnosis, and Analytical Diagnosis, the second of which makes up the greater part of the book.

Under general diagnosis, besides the sections usually found in such works, there is an adequate discussion of bacteriology, radiography, and cystoscopy. In the section on special diagnosis, the normal findings are clearly detailed and the various pathological conditions discussed from the view point of diagnosis alone. Especially valuable is the last section, in which are taken up the causes of hemorrhage, amenorrhea, dysmenorrhea and sterility and an analytical diagnosis of abdominal tumors.

The only criticism of the work is a criticism of a virtue rather than a fault, i. e., there is such a wealth of detail that one must be careful not to lose the proper perspective. As a reference work it is the best we have. Everyone who pretends to do any gynecological work who does not already possess the original, should avail himself of the present translation. The press work and binding are up to the high standard of the publishers and in keeping with the importance of the text.

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**Diet in Health and Disease.** By Julius Friedenwald, M. D., Professor of Diseases of the Stomach in the College of Physicians and Surgeons, Baltimore; and John Ruhrah, M. D., Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore. Third revised edition. Octavo of 765 pages. Philadelphia and London: W. B. Saunders Company, 1909. Cloth, \$4.00.

While the younger practitioners are probably

better versed in dietetics than older graduates, the subject is not after all a very popular one during student days, nor one which receives from physicians the attention which it unquestionably deserves. Books like the present volume should be extensively read, and evidently such is the case for the present is the third edition gotten out in a comparatively short time.

The articles on milk and alcohol have been rewritten and additions made to the sections on tuberculosis, the salt-free diet, rectal feeding, the caloric needs of infants and minor additions to many other sections.

Among the topics considered are: "Classes of Foods," "Beverages and Stimulants," "Various Factors and Their Bearing on Diet," "Infant Feeding," "Diet for Special Conditions," "Special Methods of Feeding," "Diet in Disease," "Special Cures," "The Dietetic Management of Surgical Cases," "Army and Navy Rations," "Dietaries in Public Institutions," "Recipes," "The Chemical Composition of American Food Materials," "Rapid Reference Diet Lists."

The book is concise and practical and can be highly recommended.

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**A Text Book on Practical Obstetrics.** By E. H. Grandin, A. B., M. D., Gynecologist to the Columbus Hospital, with the collaboration of G. W. Jarman, M. D., Gynecologist to the General Memorial Hospital, and Simon Marx, M. D., late Surgeon to the New York Maternity Hospital. Fourth Edition, revised and enlarged. 538 pages; 116 illustrations and 47 full page photographic plates. Philadelphia, F. A. Davis Company, 1909.

The title of this book reveals its chief characteristic, namely, the practical nature of its contents. The authors enter into no discussions of theories or mooted points, there are no historical references and rarely is the name of an investigator or originator mentioned. The presentation of facts has been the aim of the writers. That which is commended by the majority of authorities is described clearly and concisely. If one depended upon such a book for his obstetrical education he would miss much that he should know, much that is interesting and profitable, yet were he to master its contents, he would undoubtedly become a good accoucheur. He would, however, be lamentably weak in those portions of physiology, bacteriology and pathology which pertain to obstetrics. Many of the plates contain excellent likenesses of the authors. As a practical guide it is a fair book; there are many better volumes, however, on the subject.

**Hand-Book of Obstetrics.** By R. Cadwalader, A. M., M. D., Assistant in Obstetrics, University of California Medical Department, San Francisco. 370 pages, 104 illustrations, flexible cloth. Philadelphia, F. A. Davis & Company, 1908.

The arrangement of this book is along well known lines, being divided into 27 chapters treating of anatomy, physiology, embryology, the conduct of normal labor, the puerperium, care of the child, operative obstetrics, ectopic pregnancy, and the toxemias. The teaching throughout follows, for the most part, along well established lines, but there are more discussions of mooted points than in the book of Grandin, Jarman and Marx reviewed above. In general, the style is good, but here and there the author allows himself to lapse into a conversational diction which is out of place in a scientific book. At times there is a certain looseness of expression which obscures the meaning, as for example, on page seven, where this statement occurs: "Because of the better development of the right side of the body, the right side of the pelvis is often slightly so." There are a few incorrect spellings especially in the first chapters. These are all points which are perhaps of minor importance, but they should be remedied in a second edition.

The illustrations are not original, the majority being reproduced from Grandin and Jarman.

The press work and binding are good. It is to be hoped that the errors above pointed out will be corrected, for the book is a useful one and a credit to its author.

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**Obstetrics.** A Manual for Students and Practitioners. By David J. Evans, M. D., Lecturer on Obstetrics in McGill University, Montreal; Fellow of the Obstetrical Society of London. New (2d) edition, enlarged and thoroughly revised. 12mo, 440 pages, with 169 illustrations. Cloth, \$2.25 net. Lea & Febiger, Philadelphia and New York, 1909.

This book, intended to be a brief manual of obstetrics, is well written and handsomely printed and bound. It has proven a useful book, for two printings of the first edition were required to supply the demand. The author has now thoroughly revised it, rewriting the chapters which latest research have rendered necessary, and leaving out that which has fallen into disuse.

The principal revisions have been in the sections dealing with the Implantation of the Ovum, the Development of the Placenta and the Toxemias. Pubiotomy is discussed in an excellent resume and Symphysiotomy is mentioned very briefly.

The author is conservative and advises operative measures only when absolutely necessary.

As a short manual the book is to be recommended.

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**Medical Sociology.** A Series of Observations Touching upon the Sociology of Health and the Relations of Medicine to Society. By James Peter Warbasse, Surgeon to the German Hospital, New York City. 354 pages; 5½x8 in., cloth, \$2.00. D. Appleton & Company, New York, 1909.

This book is intended for the laity as well as for the profession. It is a collection of essays of very variable length on important topics, such as "Public Policy and the Medical Profession," "Federal Interest in the Health of the People," "Some Medical Aspects of Civilization," "Healthfulness and Happiness," "The Instruction of the Young in Sexual Hygiene," "Education and the Health and Efficiency of Girls," etc. There are some 25 of these observations in the first section, a group intended especially for the lay reader. In the second part are 35 essays, some but a page in length, dealing with educational and economic questions which are of especial interest to the physician. "The Preceptor," "The Physician in Politics," "Knowledge versus Manners," "Medical Practice in Utopia," are some of the subjects.

The author was until recently the editor of the *New York Journal of Medicine*, and he did his work well. Some of the observations first appeared in that Journal. He writes easily and expresses himself clearly. The book will make an acceptable Christmas gift to a medical friend, and is an excellent volume for the waiting room table.

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**The Examination of the Function of the Intestines by Means of the Test Diet.** By Prof. Adolf Schmidt, University of Halle. Translated from the second German edition by Charles D. Aaron, M. D., Professor of Diseases of the Stomach and Intestines in the Detroit Post-Graduate School of Medicine, etc. Pages, 126; illustrated in colors. Philadelphia, F. A. Davis Company, 1909.

The appearance of the first edition of this little book, which we reviewed two years ago, gave an impetus to the adoption of the useful methods described, and the application of test diets with stool examinations has been widely made. Experience has confirmed the value of the method. Schmidt has carefully reinvestigated the whole subject and has added new material to his book.

Dr. Aaron has made a good translation, thus putting the latest information in the hands of the



English-speaking and reading profession. The book should be widely used as a guide and will not prove disappointing.

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**The Principles of Bacteriology.** A Practical Manual for Students and Physicians. By A. C. Abbott, M. D., Professor of Hygiene, University of Pennsylvania. New (8th) edition, thoroughly revised. 12mo, 631 pages, with 100 illustrations, 26 in colors. Cloth, \$2.75 net. Lea & Febiger, Philadelphia and New York, 1909.

Abbott's Bacteriology was one of the earliest text books on the subject. Indeed, when it first appeared, 18 years ago, there was no other book in English on the subject except that of Sternberg. The book is written on the assumption that the reader is unfamiliar with the subject and the author therefore takes it up systematically, concisely and logically. Full instructions as to the methods of study are given and these are applied to the recognition of some of the commoner and more important organisms.

Successive classes of students have used the book, eight editions having been required to keep it up to date. It has undergone complete revision. It has been interesting to the reviewer to compare the first with the present edition, for such a comparison affords an index to the tremendous progress made during the past two decades. The book remains a standard one, and as a manual for the beginner is unsurpassed.

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**A Practical Treatise on Diseases of the Skin.** For the Use of Students and Practitioners. By J. Nevins Hyde, A. M., M. D., Professor of Dermatology and Venereal Diseases in the University of Chicago, Medical Department (Rush Medical College). New (8th) edition, thoroughly revised and much enlarged. In one very handsome octavo volume of about 1137 pages, with 223 engravings and 58 full-page plates, in colors and monochrome. Cloth, \$5.00, net. Lea & Febiger, Philadelphia and New York, 1909.

Many are familiar with the earlier editions of this excellent book, for it has been before the profession for nearly 25 years, seven large editions having been printed. The author is one of the foremost dermatologists in this country, and being a successful teacher, he knows how to present his subject in the most telling way. No small effort has been expended in revising this edition. Many additions of the rarer, and especially of the tropical skin diseases, have been made. The illustrations, so essential in a book on skin diseases, have never been surpassed outside of the elaborate atlases. The monochromes are especially good.

As a single volume work on dermatology, this new edition is without an equal.

**Gout.** By Prof. Dr. H. Strauss, of Berlin. Translated under the direction of Nellis Barnes Foster, M. D., of New York. 70 pages; E. B. Treat & Company, New York. Cloth, \$1.00.

It is unfortunate that publishers do not give us more monographs such as this. It would go a long way towards giving the reader an opportunity of separating the desirable books from those of less interest.

Fortunately the seven other treatises that make up this series are equally fascinating. They all concern disorder of Metabolism and Nutrition and make up a set that is of the utmost value to every practitioner.

The author, at the outset, realizes the impossibility of presenting so complex a subject in a short monograph, yet he gives an excellent resumé of the relation of uric acid to the disease, and the factors that have to do with the retention of uric acid in the body. Hardly a page is given to the well-known symptomatology of this disease. The remainder is devoted to the treatment, which is presented in a clear and useful manner. Set diet lists are not in evidence. Instead, tables showing the purin content of different forms of food, as well as recommendations in regard to applying principles of diet and medication, are ably presented.

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**Angina Pectoris.** By Prof. Edmund von Neusser, M. D., of Vienna. Translated by Andrew MacFarlane, M. D. 71 pages; E. B. Treat & Company, New York. Cloth, \$1.00.

This little monograph on Angina Pectoris is the third and last of a series of clinical treatises on the symptomatology and diagnosis of Disorders of Respiration and Circulation written by Prof. von Neusser. It is a remarkable little book in many ways. Not only does it take up the subject of Angina Pectoris as commonly regarded in the average text-book, but it also groups under Angina those forms of breast-pang that arise from intoxication, spinal chord disease, cardiac insufficiencies and functional disturbances.

The author gives ample illustrations of the various forms of stenocardia that he describes and makes clear his groupings, both from a clinical and etiological standpoint.

More attention might have been given to the therapeutics during the attacks and also in the intervals, whereas the mention of the part played by the adrenals in the production of spasm in arterioles and hypertension might well be omitted.

This last volume of the series, as well as the



two preceding, are well worth buying. They contain a fund of recent knowledge well presented.

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**Human Physiology.** An Elementary Text-Book of Anatomy, Physiology and Hygiene. By John W. Ritchie, Professor of Biology, College of William and Mary, Virginia. Pp. 361; 156 illustrations; cloth. World Book Company, Yonkers, 1909.

Although this book is written for use in High Schools, we confess that we sat up late one night to read it through, for the author has such an attractive way of putting things that the most elementary facts assume a new meaning. The lessons regarding the use of alcohol and tobacco are forcefully set forth, yet without any exaggeration or fanaticism.

There are excellent chapters on "Preventing the Spread of Disease Germs" and on Tuberculosis," the facts being so simply explained that a child of twelve can understand them.

The book should receive a hearty welcome from school boards everywhere. It is well printed and bound and the illustrations are excellent.

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**A Text-book of Practical Therapeutics.** With especial reference to the application of remedial measures to disease and their employment upon a rational basis. By Hobart Amory Hare, M. D., Professor of Therapeutics in the Jefferson Medical College of Philadelphia. Thirteenth edition, thoroughly revised. Octavo, 951 pages, with 122 engravings, and four full-page colored plates. Cloth, \$4.00, net; leather, \$5.00, net; half morocco, \$5.50, net. Lea & Febiger, Philadelphia and New York, 1909.

Few books will be found in more physicians' libraries than Hare's Therapeutics. The method of putting the contained information together was an invention of Dr. Hare and he has had so many opportunities of revising and perfecting it, that it may be said to be the most useful book on the subject. The alphabetical arrangement with abundant cross references, and two indexes, make ready reference easy. In reviewing a former edition, we said that, in our opinion, it is a poor book for the student. We think so still, but believe it an excellent one for the practitioner.

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**The Secret of Sex.** By E. Rumley Dawson. L. C. R. P., M. R. C. S. Pp. 64. Paper. Cochran Publishing Company, Tribune Building, New York.

The author starts out with a statement that his attention was first called to the fact, in 1887, that "the great problem of sex was still unsolved."

Wherefore he set to work, and thirteen years later announced to the Obstetrical Society of London his discovery that "the supplying ovary is in reality the essential factor in the causation of sex." He says, "I find that a male fetus is due to the fertilization of an ovum that came from the right ovary, and a female fetus is due to the fertilization of an ovum that came from the left ovary." Further, ovulation takes place from the right and left ovary alternately. Hence the sex of a second child may be foretold or even controlled. Simple enough, but very unscientific and at variance with many known facts. The author claims 97 per cent of success in his prophecies. The pamphlet is so full of evident errors and distortions, that it is not worthy of serious consideration.

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**Progressive Medicine, Vol. III., September, 1909.** A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, 336 pages, with 37 engravings. Per annum, in four cloth-bound volumes, \$9.00; in paper binding, \$6.00. Lea & Febiger, Publishers, Philadelphia and New York.

The September issue of *Progressive Medicine* covers four departments. Under Diseases of the Thorax and Its Viscera, Professor Ewart gives a summary of the recent knowledge in this field, paying especial attention to tuberculosis, pleurisy, common colds and affections of the heart. Dermatology and Syphilis are reviewed by Dr. Gottheil in a thorough manner. There is not much which is new in the department of obstetrics, yet Dr. Davis has made a very readable section out of the material at hand. On the contrary, Spiller considers many important papers in his section on Nervous Diseases.

*Progressive Medicine*, if carefully studied, will keep a man abreast of the times.

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**International Clinics.** A quarterly of illustrated clinical lectures and specially prepared original articles on treatment, surgery, medicine, neurology, pediatrics, obstetrics, gynecology, orthopedics, pathology, dermatology, ophthalmology, otology, rhinology, laryngology, hygiene and other topics of interest to students and practitioners by leading members of the medical profession throughout the world. Edited by W. T. Longcope, M. D., Philadelphia. Vol. I., II., and III., nineteenth series, 1909. Philadelphia and London: J. B. Lippincott Company, 1909.

These three volumes contain 59 papers bearing on all departments of medicine, many of them by

men of international reputation. The editor selects timely topics and the men best fitted to write upon them. Neither time nor expense is spared in preparing the manuscripts for the press, and illustrations are inserted wherever practicable.

In volume I there is an excellent review of the progress of medicine during the past year. Stevens reviews "Treatment," Edsall "General Medicine" and Bloodgood "Surgery."

We have repeatedly called attention to the excellence of these volumes, and it is no exaggeration to say that they are constantly improving.

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**Manual of Therapeutics.** Referring Especially to the Products of the Pharmaceutical and Bio-

logical Laboratories of Parke, Davis & Company, Detroit, Mich.

This neat manual of 643 pages, well printed and bound in flexible leather, contains much useful information in a form readily found. The usual tables of weights, measures, incompatibles, obstetric dates, foods, notes on feeding, etc., are first given, followed by 60 pages of "Therapeutic Suggestions." The bulk of the book consists of an alphabetical list of drugs, with the properties, doses and preparations.

The manual will be sent free on application and it is well worth having, for it has been very carefully prepared.

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## Department of Western Michigan

Comprising the Fifth and Eleventh Councilor Districts.

**F. C. WARNSHUIS, GRAND RAPIDS,  
CORRESPONDENT,**

Assisted by

F. G. Sheffield, Hastings.  
C. S. Cope, Ionia.  
G. H. Thomas, Holland.  
Donald Mac Intyre, Big Rapids.

H. L. Bower, Greenville.  
V. A. Clapman, Muskegon.  
G. G. Burns, Fremont.  
D. S. Fleischauer, Reed City.

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### Ionia.

The Seventh Annual Meeting of the Ionia County Medical Society was held in Ionia, October 14th. Dr. W. J. Du Bois, of Grand Rapids, read a much appreciated paper on "Renal Calculi." This was thoroughly discussed by those present.

The following officers were elected: President, G. A. Stanton, Belding; first vice-president, C. C. Dellenbaugh, Portland; second vice-President, F. A. Hargrave, Palo; third vice-president, W. J. Wilkerson, Orleans; fourth vice-president, F. B. Morse, Lake Odessa; secretary-treasurer, reelected for the fifth consecutive time, C. S. Cope, Ionia.

The society voted to accept the defense plan as adopted by the State Society.

We close the year out of debt and with a fine showing of good meetings and many things accomplished for the social and financial advancement of our members.

The following resolution was adopted:  
To the Hon. Montgomery Webster, Judge of Probate for Ionia County.

At its annual meeting, held in Ionia, October 14, 1909, the Ionia County Medical Society adopted

the following resolution:

Resolved, That the members of the Ionia County Medical Society refuse to make further visits to the Asylum and examinations of the insane for a fee less than five dollars, plus a mileage of fifty cents a mile measured one way from the physician's office to the Asylum. Heretofore the service in this line has been done more as a courtesy to your office than from any spirit of commercialism. Inasmuch as the County pays us five dollars for examinations of the insane, and our private patients pay us a mileage of fifty cents, we deem it not improper to ask that the State pay the same as is paid by the County and our private patients. We therefore respectfully decline to make further examinations in these cases until assured by you in writing, addressed to our secretary, Dr. C. S. Cope, that the foregoing request will be complied with.

(Signed) C. S. Cope, M. D.; J. J. McCann, M. D.; E. F. Beckwith, M. D.; George Moore, M. D.; T. R. Allen, M. D.; W. E. Ogden, M. D.; W. L. Barnes, M. D.; J. J. Deffendorf, M. D.; F. M. Marsh, M. D.; F. L. Hoag, M. D.; J. P. Winchell, M. D.

The next meeting of the Society will be held at Ionia, on the second Thursday in January, 1910. Papers will be read by Drs. J. J. McCann, F. A. Hargrave and J. F. Pinkham. The subjects will be later announced.

C. S. COPE, *Sec'y.*

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### Kent.

Dr. E. W. Tolley returned, October 1st, from New York City, where he spent three weeks attending the various clinics of that city.

Dr. Alfred Webster, a retired homeopathic physician, committed suicide by shooting himself through the heart. Dr. Webster had been secretary of the New Era Insurance Association and recent investigation of his accounts showed him to be short some \$15,000.

Dr. Walter Moffatt returned, October 1st, from a two weeks' vacation spent in the Northern Michigan resorts.

Dr. J. B. Hilliker, Coroner for Kent County, attended the Hudson celebration in New York City.

Dr. Earl McCoy, who has been one of the medical staff at the Howell Tuberculosis Sanitarium for the past year, has returned to Grand Rapids and resumed practice.

The following doctors have been elected to the new anesthetic corp of Butterworth Hospital: Dr. A. Verne Wenger, Dr. Harold Dingman, Dr. J. B. Whinery, Dr. Rowland Webb.

Dr. Wm. DeLano, Health Officer, has been granted thirty days' leave of absence by the Grand Rapids Board of Health. Dr. DeLano has been in poor health and it is hoped that this vacation will restore him to his normal condition. During his absence his duties will be performed by City Physician Apted.

Miss Hall, a graduate of the Toronto Hospital, has been appointed dietitian for Butterworth Hospital. She assumed her new duties October 6th.

Dr. Archibald Church, of Chicago, read a paper before the Grand Rapids Academy of Medicine on October 6th.

Dr. M. E. Roberts returned to Grand Rapids October 9th, after spending two weeks on his wheat farm in the Northwest Canada, and on his return home he spent ten days at the Mayo's Clinic.

The annual meeting of the U. B. A. Hospital was held October 14th. Nothing but the routine business was transacted. The various officers

rendered their annual reports, which revealed the financial condition and the work accomplished during the past year in a very satisfactory condition.

Dr. A. Nyland, of Grand Rapids, was elected President of the State Board of Medical Examiners at its recent meeting held in Lansing.

Dr. D. Gleysteen, of Alton, Iowa, "spent a few days visiting old classmates and friends in Grand Rapids, while on his way to do post-graduate work in New York City.

Dr. J. O. Edie left for Salt Lake City to spend three weeks with his daughter. The doctor expects to return about the middle of November.

Dr. W. E. Rowe, formerly of Allegan, but recently located in Grand Rapids, who has been in poor health recently, went to Chicago for medical advice and treatment.

### THE KENT COUNTY MEDICAL SOCIETY.

At its regular meeting on October 13th, Dr. Schuyler C. Graves read a paper on "Cancer of the Penis and Its Treatment by Extirpation of the Organ and Perineal Transplantation of the Urethra." The doctor exhibited one of his recent cases to illustrate the interesting points of his paper. Without a dissenting vote the Society adopted the Medical Legal Defense Plan as presented by the State Society. The Society also elected Dr. G. L. McBride as its representative in this League. At its regular meeting on October 27th, Dr. Robert H. Babcock, of Chicago, was the invited essayist of the evening. The title of the doctor's paper was, "Some Considerations of Cardiac Neuroses or the So-called Functional Diseases of the Heart." The discussion was opened by Dr. J. B. Griswold and Dr. T. C. Irwin. After the meeting a smoker was held at the Pantlind Hotel. A pleasing menu with impromptu speeches and stories created the expression of a demand by the members that this feature be of frequent occurrence.

Dr. C. H. Johnston entertained informally at his home with a dinner in honor of Dr. Babcock.

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### Ottawa.

At the annual meeting of the Ottawa County Society, held October 12, 1909, the officers elected were: President, T. G. Huizenga, Zeeland; first vice-president, D. G. Cook, Holloway; second vice-president, J. F. Pepler, Byron Centre; secretary and treasurer, Geo. H. Thomas, Holland.



Delegate to State Society, J. J. Mersen, Holland; alternate, W. G. Winter, Holland. Board of Directors: Wm. De Klein, Grand Haven, chairman; B. B. Godfrey, Holland; H. Leenhouts, Holland; G. H. Thomas, Holland. Committee on Program and Scientific Work: T. G. Huizenga, Zeeland; J. F. Peppler, Byron Centre; D. G. Cook, Holland; G. H. Thomas, Holland. Committee on Public Health and Legislation: T. A. Booth, Holland; R. J. Walker, Saugatuck; C. P. Brown, Spring Lake. J. B. Whinery, of Grand Rapids, read an interesting and instructive paper on "The Effect of Kidney Lesions on the Heart and Blood Vessels."

A vote of thanks was given Dr. Whinery and his paper requested for publication in the *STATE JOURNAL*.

The secretary was instructed to secure the views of the members in regard to the Medico Legal defense by correspondence and report at the next meeting.

Dr. G. D. Cook is spending three weeks in Rochester, Minn., attending the Mayo's Clinics.

Dr. T. G. Huizenga, of Zeeland, performed a Cesarean section on a woman in Hudson, October 8th. The patient was at full term and normal labor had begun several hours before the operation. Both mother and child are doing nicely at the present time.

Dr. Edward Kremers left Holland October 1st for Washington, D. C., where he has secured an appointment in the Army Medical Corps. Dr. Kremers is a young man of exceptional ability and of a modest, studious disposition and will be missed by every member of the Ottawa County Medical Society, of which he was the secretary. A desire to be free from the cares of general practice and have more time for scientific and research work was the incentive which induced him to leave his many patients and friends here.

GEO. H. THOMAS, *Sec'y*.

## County Society News

### Houghton.

The September meeting of the Houghton County Medical Society was held at the Douglas House, Houghton. The committee appointed to enumerate the number of cases of pulmonary tuberculosis, reported 210 cases in the county.

Dr. R. B. Harkness, of Houghton, reported an outbreak of typhoid fever, 18 cases in all, 11 of which came down within 8 days, August 3rd to 11th. The interesting question in connection with the outbreak was the source of infection. This may have been from the water supply which comes from Cole's Creek. An examination of the water by Vaughan showed a high organic content, and its use was condemned. The only people infected worked in the smelter and were closely associated, while occupants of houses supplied with the same water were not attacked. The ice supply was suspected, as 10 out of 12 machinists who were in the habit of using ice water kept in a pail were attacked, but none of the residents of Houghton who used the same ice supply were infected. Another source of infection may have been by flies, from excreta deposited by the men in the yard during last December and again in March. The cases were all characterized by a high

temperature, 104° or more, a dicrotic pulse, 120 and over, and splenic enlargement. Constipation was the rule; one case of diarrhea, and two of intestinal hemorrhage.

The diet was milk, with two soft boiled eggs, or egg-nog, per day. Three quarts of water were allowed daily, one case with a marked polyuria drinking eight quarts per day. Drugs, acetozone in four cases, aspirin in one, and salol in thirteen. The bowels were moved by enema every second day.

In the discussion, Dr. Scott considered the source of infection the most interesting feature. The head waters of Cole's Creek drain the country up to the Atlantic mine, and it seems that the water might be easily contaminated. As to diagnosis, he finds that a case with a coated tongue and a remitting fever lasting over a week to be almost invariably typhoid fever.

Dr. A. Simonson, of Calumet, reported two cases and two sudden deaths. In one of these the cause of death could not be determined. The other patient had complained of a slight sore throat, but had not consulted a physician. After eating dinner he tried to sleep and in a short time called to his wife that he was dying, and before the arrival of his physician, had expired. An autopsy showed death to be due to edema of the glottis.

The paper of the evening was read by Dr.

Simonson and was entitled, 'A Review of Sajous' Work on the Internal Secretions.' He stated that the work forms a mine of information collected from the immense, scattered literature of the world. A brief review would be a great injustice to the author and his work, and would scarcely give any sort of conception of the enormous and patient labor expended in its compilation. Dr. George Dock, writing on this subject in Modern Medicine, refers to the work as monumental.

In this work, Sajous expresses very decided views on the importance of the ductless glands, particularly the adrenal system, consisting of the thyroid gland, the anterior pituitary body, and the adrenals; also the relation of the adrenal system to the general motor system and the pneumogastric nerve, and the relation of the internal secretions to immunity and the protective role of the leucocytes. He has gone outside the beaten paths and given us a new conception of the factors bearing directly on immunity. Upon pharmacodynamics, he has built up a system of pathogenesis and therapeutics, all of which should command the admiration of the student of the science and art of medicine.

JOHN MACRAE, *Sec'y.*

#### Huron.

The Huron County Medical Society held its regular annual meeting, supper and election of officers October 18th. The following officers were elected for the ensuing year: President, Dr. Frank E. Luton, of Kilmanagh; vice-president, Dr. C. B. Morden, of Bad Axe; secretary-treasurer, Dr. D. Conboy, of Bad Axe; delegate to the State Society, Dr. D. J. Lackie, of Grindstone City; alternate delegate, Dr. B. Friedlander, of Sebawaing. Dr. D. Conboy was appointed county member of the Medico-Legal Committee of the State Defense League.

Dr. W. J. Herrington read a paper on "Appendicitis," which was thoroughly discussed.

D. CONBOY, *Sec'y.*

#### Isabella.

The regular annual meeting of the Isabella-Clare Medical Society was held in Maccabee hall, Mount Pleasant, October 20th.

Dr. J. A. Reeder, of Clare, was elected to membership and Dr. E. B. Smith, of Detroit, was elected to honorary membership. Dr. Smith gave

a lecture before the society at the annual meeting of last year. The lecture was on the general topic of "Fractures," and was the best ever delivered before the society.

Dr. McRae, of Beal City, read a paper entitled, "Appendicitis from the Standpoint of the General Practitioner." Dr. H. V. Abbott, of Shepherd, read a paper entitled, "Pernicious Anemia." Both papers were instructive and interesting, and were especially valuable from the fact that neither was compiled, but in each the doctors wrote their own views and experiences. We want more papers of this kind.

The medico-legal matter was discussed, but action was deferred until the January meeting, at which time the members will be better able to decide whether or not such an arrangement will be desirable.

It was decided that the January meeting shall be followed by a banquet in the evening, the physicians' wives being in attendance.

Election of officers: Dr. B. F. Johnson, Rosebush, president; Dr. C. M. Baskerville, Mount Pleasant, vice-president; Dr. S. E. Gardiner, Mount Pleasant, secretary-treasurer.

S. E. GARDINER, *Sec'y.*

#### Jackson.

A special meeting of Jackson County Medical Society was held September 28th, 1909.

A report of the Committee on the Medical Defense Plan was called for, adopted, and a ballot placed on file, showing that Jackson County, by a large majority of all its members, voted not to avail itself of the privileges of the Medico-Legal Bureau.

The attention of the Society was called by a member of the Committee of Public Health and Legislation to matters coming to his attention in relation to objectionable practice on the part of one of its members. The matter was referred to the Committee on Public Health and Legislation, to which two other members were added with instructions to investigate such matters, giving the accused member opportunity to appear before the committee; said committee to report at a subsequent meeting of the society.

R. GRACE HENDRICK, *Sec'y.*

The schedule for post-graduate work for the rest of the year is as follows:

November 16th. Valvular Diseases of the

Heart: Etiology, Diagnosis and Treatment, E. S. Peterson. Discussion, A. R. Williams.

November 23rd. The Contract Relation Between Physician and Patient, F. G. Kline.

November 30th. Syphilis of the Nervous System, F. W. Rogers. Discussion, F. J. Gibson.

December 7th. Surgical Clinique at City Hospital. Arranged by Colin D. Munro.

December 14th. The Conduct of Normal Labor and the Puerperium, Martha C. Strong. Discussion, J. C. Smith.

December 21st. Difficult Labor; Causes and Treatment, Christopher G. Parnall. Discussion, P. Hyndman.

January 4th. The Puerperal Infections; Bacteriology, Diagnosis and Treatment, George A. Seybold. Discussion, E. L. Morrison.

January 11th. The Diseases of the Mammary Glands, Edwin C. Taylor. Discussion, G. R. Pray.

January 18th. Demonstration of Examination of the Blood, Normal and Pathological. Arranged by Walter R. Snow.

January 25th. Throat Clinique. Arranged by George E. Winter.

February 1st. Hyper-thyroidism; Causes, Symptoms and Treatment, Delbert E. Robinson. Discussion, J. E. Munro.

February 8th. Hypo-thyroidism; Causes, Symptoms and Treatment, Joseph C. Kugler. Discussion, C. E. Stewart.

February 15th. Eye Clinique. Arranged by T. S. Langford.

February 22nd. Diseases of the Pancreas, W. H. Enders. Discussion, W. J. Marks.

March 1st. Some Remedial Measures Not Medicinal or Surgical, L. J. Harris. Discussion, H. D. Brown.

March 8th. Medical Clinique. Arranged by N. H. Williams.

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### Lapeer.

The annual meeting of the Lapeer County Medical Society was held in the parlors of the Hotel Graham on Wednesday, October 13th, 1909, and the following were elected officers for the ensuing year: President, Dr. John P. Eggleston, Inlay City; vice-president, Dr. John V. Frazier, Lapeer; secretary, Dr. Calvin A. Wisner, Columbiaville; treasurer, Dr. A. O. Bolton, Attica.

Papers were read by Drs. Randall and Conover, of Flint.

C. A. WISNER, *Sec'y.*

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### Monroe.

At the fourteenth annual meeting of the Monroe County Medical Society, held at Monroe, October 21, 1909, the following papers were presented: "Phimosis," by Dr. McCallum; "Treatment of Chronic Sciatica," by Dr. Sisung.

At this meeting the following officers were also elected: President, Dr. E. M. Cooper, Carleton; vice-president, Dr. E. S. Cornwell, LaSalle; secretary-treasurer, Dr. C. T. Southworth, Monroe. Member of Medical Defense Committee, Dr. P. S. Root, Monroe.

The next meeting will be held at Monroe on the third Thursday in January, 1910.

C. T. SOUTHWORTH, *Sec'y.*

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### Shiawassee.

The Shiawassee County Society has sent out the following letter to its members:

Dear Doctor:—

Our president and secretary think that a letter to you instead of an October meeting might be a good thing. At the beginning of the year the president and secretary made up their minds that they would sometime during the year try to put the Shiawassee County Medical Society among the first in the state as to membership. During the last few weeks we have done so. In fact at present only five men, that are eligible and practicing in Shiawassee county, do not belong to the society. This includes all eligible and registered practitioners.

We have called personally on every physician in the county, this being made possible by the use of the president's automobile. We have traveled nearly 250 miles to do this and have called on 58 different doctors, and spent about five days of our time doing so. On two occasions others of the profession have made these trips with us.

On these trips we have discovered a few things. We have discovered that there cannot be found a better lot of men than we have called upon while on these trips, we have found that none could treat us more courteously. We have found you all working hard, some struggling along, a few



have means. None are wealthy in this world's goods and none are anxious to be.

Owosso men are not much affected by outside conditions, but they wish to come over and help you in any matters that they can. The fees outside of Owosso are generally too low, and we are afraid many do not stick to the fees you already have. We want you all to have reasonable fees. Stick to them and we well-to-do physicians, as your farmer patients are well-to-do farmers.

Our profession is not a commercial one, but we must live, and by reasonable fees and good management hope that we can see a day when as new men come into the field and take our places we will not have to struggle for an existence.

Petty jealousies or the fear of overcharging should not interfere with your getting a reasonable fee for your work. Nearly every man outside of Owosso has expressed himself as willing to follow a liberal schedule and we want you to get together soon on this matter.

We have further discovered in Owosso and out that it never pays to talk about the other physician. It never pays to say: "He makes too many calls." Perhaps you make too few. It never pays to say: "He charges too much," the chances are very much that you undervalue your services.

Satisfied patients get you more new patients than any other method of advertising. There are many better ways of getting acquainted with and keeping before the public than having your name in the newspaper, in connection with your professional doings.

We hope you all may get many new patients, if patients are to be had, and that you will do your best by them. We have found that patients are very often more to blame for trouble between doctors than are the doctors. We believe the feeling in the county today is the best between physicians that it ever has been.

Let's make this society a power for good in this community for our patients as well as ourselves. We have made these trips for the County Medical Society to collect the dues, get new members, get acquainted with you and get a few pointers by asking questions from each man, and we print the above letter as not being original but as being the condensed thoughts you have given us.

In the county there are 56 registered and eligible physicians, 51 of whom are members and have paid their dues to January 1st, 1910. We hope to get soon the other five.

With best wishes, we are,

Yours truly,

DR. A. L. ARNOLD, *Pres.*

DR. R. C. MAHANEY, *Sec'y-Treas.*

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### Tuscola.

At the regular annual meeting of the Tuscola County Medical Society, held at the Hotel Montague, Caro, October 11th, 1909, the following officers were elected for the ensuing year: President, Dr. C. H. McLean, Caro; vice-president, Dr. J. H. Hays, Cass City; secretary-treasurer, Dr. W. C. Garvin, Millington; trustee for three years, Dr. M. M. Wickware, Cass City.

The trustees were instructed to close the contract with the Board of Supervisors for the care of the indigent sick for another year, which has since been confirmed.

W. C. GARVIN, *Sec'y.*

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### Wayne.

At the meeting on October 14th, Dr. A. P. Biddle presented the following cases: 1. A case of papilloma. 2. Case of tuberculous lesion of the face. 3. Obstinate case of infected hair follicle. 4. Case of psoriasis in negro. 5. Case of syphilis with lesions on leg.

Dr. J. N. Bell read a paper on the "Management of Labor in Contracted Pelves," in which he deplored the fact that the pelvimeter is used by but few physicians. The methods of choice with contractions of various degrees were outlined. Under prophylaxis the following were some of the points brought out: Use pelvimeter in all cases seen for the first time. A fairly accurate estimate can be gained by the pelvimeter and finger. Labor may be induced in the 35th or 36th week in relatively contracted cases. Make early complete examinations, and so reduce infant and maternal mortality. Benefit future mothers by hygiene, horseback riding astride, mountain climbing, skating, etc.

In discussion, Dr. Morley considered necessary a routine examination with the pelvimeter. He showed a chart with pelvic diameters and a method of obtaining the measurements.

Dr. Blodgett demonstrated the methods by means of the bony pelvis and made the point that extending the legs under anaesthesia increased the antero-posterior diameter.

Dr. Carstens said that variation in size of the bones causes differences in the measurements and that it is difficult to get to the sacrum. He be-

lieved in making measurements, but did not put much faith in outside measurements, as the size of the head must be considered. He thought Tarnier forceps should always be tried before craniotomy.

Dr. Brooks followed and spoke along the same lines.

Dr. Silver related a case of contracted pelvis in which an effort at high forceps delivery was successful.

Dr. Davis considered the child's head and pelvis, together with uterine contractions and the position of the mother as being all factors to consider in the descent of the child.

Dr. Parmeter believed that Cesarian section is the elective method, because in contracted pelvis, the child's head is usually advanced in ossification. Where forceps had been tried without avail, he advised extra peritoneal Cesarian section.

Dr. Bell, in closing, thought Dr. Morley's scheme good, but did not believe anything could be gained by flexing and extending the legs, as Dr. Blodgett suggested.

Report of the delegates of the State Medical Society read by Dr. Robbins.

The society voted to extend an invitation to the Mississippi Valley Medical Society to meet in Detroit next fall.

On October 11th, Dr. A. W. Ives presented a paper, entitled "Evidences of Evolution," before the medical section.

The program for the general meeting, October 18th, consisted of a paper on "Puerperal Insanity," by Dr. David R. Clark.

The author disclaimed any new points for his paper, but stated that he wished to emphasize the fact that there was one form of insanity that was typical of the puerperal period. He stated that the puerperium merely developed that type of mental disorder that was latent in the individual. He cited first, a case of manic-depressive insanity showing psycho-motor acceleration with flight of ideas; second, a case of delirium of collapse with bewilderment; third, a case of infection delirium; fourth, three cases of the katatonic type of dementia precox with catalepsy, negativism, and stereotypy, and showing the three possible termini of that disease, chronicity, recovery with recognized defect and recovery without recognizable defect.

Doctor Clark discussed the question of delirium of collapse being of infectious origin and terminated his paper by discussing the intimate causal relationship between the puerperal state and the katatonic types of dementia precox.

In opening the discussion, Dr. Flinterman said that it would be interesting to find out how many cases of this insanity were not due to the puerperal state. He believed that many resulted from exhaustion.

Dr. Manton said that, in his opinion, the ideas concerning puerperal insanity must be revised, for he has seen the same conditions develop in other periods of life and finds that this condition comes in individuals whose minds are more or less disordered. The child-bearing epoch predisposes to insanity in many susceptible women.

Dr. Delos Parker does not believe in a distinct form of insanity of this type.

Doctor Newman stated that ten per cent of insane women began their trouble during lactation or pregnancy. Even normal women develop very peculiar nervous symptoms at this time.

Dr. Yates believes that these patients should be put into the same category as post-operative insanity cases.

Dr. Polozker did not consider puerperal insanity a separate entity.

Under new business, Dr. W. S. Anderson moved that a committee be appointed to consider a different meeting place for the society, or a medical home.

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## News

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Glen C. Hicks, of Jackson, president of the State Board of Registration in Osteopathy and a third year student in the Detroit Homeopathic College, while taking the preliminary examination before the State Board of Registration in Medicine, at Lansing, October 12th, was caught "cribbing" by Dr. Carrow, in the examination on histology. The Board subsequently passed a resolution prohibiting Hicks from again coming up for examination.

The president of the American Gynecological Society has appointed a committee to report at the next annual meeting in Washington, on the Present Status of Obstetrical Teaching in Europe and America, and to recommend improvements in the scope and character of the teaching of obstetrics in America. The committee consists of the professors of obstetrics in Columbia University, University of Pennsylvania, Harvard, Jefferson Medical College, Johns Hopkins University, Cor-

nell University and the University of Chicago. Communications from anyone interested in the subject will be gladly received by the chairman of the committee, Dr. B. C. Hirst, 1821 Spruce street, Philadelphia, Pa.

Dr. Samuel Bell, of Detroit, has opened an office at 701 and 702 Gas Office building and will devote his time to diseases of the brain and nervous system.

The Alumni Society of Harper Hospital, Detroit, held its first annual meeting and banquet at the Hotel Tuller on Saturday evening, October 23rd, 1909. Previous to the dinner Dr. H. W. Longyear read a paper, illustrated with lantern slides, on the "Diagnosis and Treatment of Nephrocoloptosis." This was discussed by Drs. C. D. Aaron and P. M. Hickey. Toasts were responded to by Drs. J. K. Gailey, H. O. Walker, Thaddeus Walker, L. J. Hirschman, G. J. Anderson and Neal L. Hoskins. The meeting was well attended and an enjoyable evening spent.

Dr. and Mrs. O. A. Griffin, of Ann Arbor, have returned from Europe. While abroad, Dr. Griffin visited many medical schools and hospitals.

Dr. Wadsworth Warren, of Detroit, has recovered from his recent severe illness and has resumed practice.

On the invitation of the Department of State of the United States Government, the Fifteenth International Congress on Hygiene and Demography will convene for the first time on the American continent in Washington, D. C., from September 26th to October 1st, 1910. Section III of this Congress deals with the subjects of the Hygiene of Infancy and Childhood and School Hygiene. It is believed that this will be a meeting of the utmost importance.

Dr. Oscar C. Breitenbach has been appointed city chemist of Escanaba; he has been conspicuous in the fight against typhoid pollution of the water supply in that locality, and has had the backing of influential citizens as well as of the municipal officers. A large mechanical filter will be installed, and an ordinance framed to have thorough milk inspection.

Dr. Myron A. Patterson, city physician of Albion, is said to be ill with typhoid fever in Hurley Hospital, Flint.

Dr. F. J. Bierkamp, of Wyandotte, has been appointed pathologist at the Youngstown Hospital, Ohio.

Dr. William De Lano, health officer of Grand Rapids, has given up his work at the tuberculosis sanatorium because of ill health.

Dr. Orley M. Vaughan, Covert, has been re-elected to a fifth term as president of the Board of Superintendents of the Poor of Van Buren county.

**ADDS TO LIST OF COMMUNICABLE DISEASES.**—At the quarterly meeting of the State Board of Health, held in Lansing October 8th, the following diseases were declared to be dangerous communicable diseases: Pneumonia, tuberculosis, typhoid fever, meningitis, diphtheria, whooping cough, scarlet fever, measles, and smallpox. The board also ruled that tetanus, rabies, erysipelas, leprosy and cancer should be reported for statistical purposes. It was decided that no person with open tuberculosis should be employed as a teacher in the public schools of the state, and a resolution was adopted instructing the secretary to prepare and issue notices to common carriers and schools forbidding the use of the common drinking cup.

At the Illinois State Fair the Board of Health had an excellent exhibit bearing upon the prevalence, prophylaxis and treatment of tuberculosis.

An opinion handed down by a Court of Common Pleas in Pittsburg holds that the State Department of Health has a right to regulate vaccination in the public schools of the state.

The Census Bureau of the United States is about to inaugurate a new system of reporting deaths, depending on a revised classification of the causes of death.

Dr. George Dock, formerly professor of medicine at Ann Arbor, has spent much of the past summer in Europe, including a week in Budapest at the International Medical Congress. Dr. Dock has now returned to his work at Tulane University, New Orleans.

It is reported that the State Board of Health is to meet representatives of railroads to discuss provisions of the new law giving the board power to require sanitary precautions on passenger trains for the protection of the public.

The Bye Cancer Cure concern, which has been one of the great cancer fakes of the country, and was exposed in Collier's weekly a few years ago, has recently been investigated by the United States Postoffice authorities and declared to be making fraudulent use of the mails. A fraud order has been issued, which is equivalent to kill-



ing the business. A similar action has been taken in the case of the Dr. Curry Cancer Cure Company, of Lebanon, Ohio.

The Supreme Court of Missouri has handed down an opinion that the school boards of that state have the right to enact and enforce rules for vaccination.

Dr. J. E. Gleason, Detroit, has returned from courses of study in Vienna and Wurzburg, and opened new offices in the Washington Arcade.

The University of Pennsylvania has established a series of courses in Public Health, leading to a diploma designating the recipient as a Certified Sanitarian. Only holders of an M. D. degree are eligible; such persons can complete the course in one academic year.

Dr. J. D. Matthews, Fine Arts building, Detroit, has returned from a course of study in Vienna.

Dr. Max Ballin, Detroit, has recently returned from a trip abroad.

Dr. George A. Fritch, of Detroit, previously suspected of criminal complicity in the death of Miss Edith Presley, is now held in \$10,000 bail on the charge of manslaughter, in connection with the death of Miss Mabel Millman, of Ann Arbor.

The Leucocyte, the organ of the alumni and students of the Detroit College of Medicine, has come under the editorship of Dr. J. H. Dempster, D. C. of M., 1909, succeeding Dr. J. E. Davis, resigned.

Dr. H. A. Hume has begun practice with his father at Owosso.

Dr. R. W. Fuller has taken up practice in the office of his father, Dr. William Fuller, Grand Rapids.

Dr. George J. Baker has located in Detroit at 854 Kercheval avenue.

Dr. R. N. Freyling has entered practice in Grand Rapids.

Dr. Willis H. Potter, of Baldwin avenue, Detroit, is spending the year in Vienna, taking up special work on the ear, nose, throat and chest.

Dr. H. H. Ellis, D. C. of M., 1908, after a year's internship in the Charlotte Sanitarium, has taken up a location in Detroit, corner Buchanan and Twenty-fourth streets.

Drs. R. C. Andries and R. G. Glemet, who have completed their internship at St. Mary's Hospital,

have opened up offices, Dr. Andries at 268 Gratiot avenue, in the Home Bank building, and Dr. Glemet in the Gas Office building.

The Bulletin is creditably informed that at least in two instances in this state an agent of one of the commercial physicians defense companies has gone to the plaintiff and encouraged him to bring suit. He also told a certain party that it was to his interest to stir up a suit occasionally, for it always resulted in his writing a lot of new business. This method of obtaining business should be borne in mind by the physicians, and our plan adopted at the Kalamazoo meeting of the State Society supported.—*Bull. of Third Councilor District.*

Announcement was made during the past month of the incorporation of a new hospital for Detroit. It will be built upon a magnificent tract of twenty acres located at the corner of the Grand and Hamilton Boulevards. The land has already been bought and paid for and the subscriptions to date total half a million. It is the intention of those interested to at first erect only such buildings as are necessary and which can without doubt be maintained, but these are to be planned so that additions can readily be made, there being land enough for a thousand-bed hospital, should the growth of the city demand it. The hospital will be a general one, but no attempt will be made to duplicate the work done by any of the special institutions of the city. For this reason there will be no contagious disease department and no free children's clinic. According to the newspaper accounts there will be separate surgical and medical buildings, and the main effort will be to provide every comfort for the poor. No wards will contain more than four beds. The hospital will be open to the profession of the state, and the whole conception would seem to be along broad lines. The incorporators include some of the most prominent men in Detroit's business and financial circles. They are Frederick M. Alger, Waldo A. Avery, John N. Bagley, George H. Barbour, Willis E. Buhl, E. Leyden Ford, Henry J. Ford, John B. Ford, Henry B. Joy, Otto Kirchner, William H. Murphy, John R. Russell, A. L. Stephens, J. Harrington Walker, Charles B. Warren and David C. Whitney.

Through the generosity of Mr. Henry Stephens, the Detroit Society for the Prevention and Relief of Tuberculosis is to have the free choice of one of three sites for its sanatorium. Two of these are located within the city limits and the third

just north of Highland Park. The building fund now contains \$6,000, and with the assurance of a free site, it will now be possible for the society to go ahead with the plans for the buildings.

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## Marriages

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Guy Luvergne Bliss, M. D., Three Rivers, to Miss Edith Gertrude Smith, of Oskaloosa, Iowa, September 1st.

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## Deaths

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John Campbell Buell, M. D., University of Michigan, Homeopathic College, 1892, died at his home in Rives Junction, September 25th, aged 39.

Albert Thibodeau, M. D., Laval University, Montreal, 1881, of Escanaba, died in the Delta County Hospital, February 13, from carcinoma, aged 49.

Henry R. Case, M. D., George Washington University, 1873, a member of the American Medical Association, died at his home in Flint, December 5th, 1908, from cancer of the neck, aged 60.

Frederick Cobold McCallum, M. D., University of Toronto, 1866, Bellevue Hospital Medical College, 1866, died at his home in Hersey, September 18th, from jaundice.

Emmett E. Richardson, M. D., Cleveland University of Medicine and Surgery, 1893, died at his home in Dundee, September 18th, aged 50.

Ezra A. Palmer, M. D., University of Michigan, 1876, Northwestern University Medical School, 1886, died at his home in Hartford, September 18, from nephritis, aged 62.

Fremont C. Warne (license, years of practice, 1900), one of the oldest practitioners of Northern Michigan, died at his home in East Jordan, September 12th.

Richard S. Forsyth, M. D., D. C. of M., 1892, of Houston, Texas, formerly local surgeon to the Northwestern System at Escanaba, and physician of Delta county, Mich., died at his summer home at La Porte, Texas, September 10th, aged 42.

Dr. S. C. Van Antwerp, a prominent member of the Kalamazoo Academy of Medicine and of the State Society, died at his home in Vicksburg, October 4th.

Dr. Van Antwerp was born at Hume, Alleghany County, N. Y., March 21, 1847. The doctor grew to manhood in Illinois and Iowa and while pursuing his studies in Oberlin College, Ohio, enlisted in May, 1864, in Company K, 115th Ohio Infantry, a company composed of college students. The fall of that year he returned to Oberlin College, where he remained until 1868.

In 1870 he entered the medical department of the University of Michigan, from which he graduated in 1872. He began practice at Orland, Ind., and after remaining there five years, located in Vicksburg.

He was married to Carrie L. Clapp, December 31st, 1885, and they have lead an ideally happy married life.

He was a man of high attainments and loyal to his profession. Fraternally he was a Mason and a Knight of the Maccabees. He served for many years on the board of education and was secretary at the time he was obliged to resign on account of ill health.

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Dr. Julian Branch died September 30th at his home in Brookfield, aged 32 years. The Eaton County Medical Society adopted the following resolutions:

*Whereas*, Death having entered our ranks and removed from our midst our esteemed brother, Dr. Julian Branch, of Brookfield, we feel that in his death the profession has lost a sincere and earnest practitioner, and his family an affectionate and loving husband and father; therefore be it

*Resolved*, That we tender to the family and friends of our deceased brother, our sincere sympathy in this their hour of affliction.

*Resolved*, That a copy of these resolutions be sent to the wife and children of the deceased; also that they be spread upon the minutes of this meeting and further that a copy be sent to the Journal of the Michigan State Medical Society for publication.

C. S. SACKETT, M. D.

A. H. BURLESON, M. D.

## Correspondence.

Detroit, November 1, 1909.

Dr. W. T. Dodge, Chairman of the Council, Big Rapids, Mich.

Dear Doctor Dodge:—In January I shall have completed four years as secretary of the Michigan State Medical Society and editor of the *Journal*. When chosen to this dual office, I determined, in case I were reelected from year to year, that I would resign at the end of four years' service. I decided upon this because it has always been my firm belief that the interests of any organization are best subserved by a change of its officers frequently enough to infuse new ideas and new enthusiasm, yet not so often as to disturb a given policy or interrupt the smooth working of the machinery. Four terms, in this instance, seem to me to meet these requirements.

Furthermore, the routine of the secretary's office and the editorial work on the *Journal* are arduous. They require more time than my other duties will at present allow.

The work has interested me greatly and I am loath to give it up. The future of medical organization was never brighter than it is today and my whole heart will be in it, even though I take a less active part than during the past four years.

Believe me, the thought of severing my official connection with the council and the membership at large grieves me, but for the reasons stated I feel that, even should the council desire me to continue, I cannot accept a reelection in January. I am writing you this early in order that ample time may be given for the consideration of candidates who may come forward for the position.

I am, sir,

Faithfully yours,

BENJAMIN R. SCHENCK, *Sec'y.*

With your permission this letter will be published in the November issue of the *JOURNAL*.

## Appeal to the Medical Profession of the West and South.

Up to the present time there has not been a concerted effort made to collect and preserve historical data in regard to the origin, evolution and personnel of our profession in this part of the country. The result of this delinquency has been the total loss of much material that should have

been preserved, especially pertaining to medical schools and societies and biographical matter in connection with the practitioners and teachers of medicine of by-gone days. A good deal of material of this character is still obtainable if a systematic effort is made to locate and preserve it. It is in the possession of individuals, families and private libraries and will eventually be lost. The Western Association for the Preservation of Medical Records was organized in May, 1909, for the purpose of collecting the historical and biographical records of the profession of the West and South. We wish to preserve anything and everything pertaining to medicine and medical men and are anxious to enlist the help and support of every member of the profession who is in sympathy with our aims. We want every one to become associated and identified with the work of our Association. There are no fees or obligations of any kind. We have made arrangements with the Lloyd Library, Cincinnati, Ohio, for the proper housing of the material collected. The latter will be systematically arranged, catalogued and preserved so that it can be made available for research work. We are particularly anxious to obtain—

1. Medical journals published in the West and South prior to 1880.

2. Medical books and pamphlets written or published in the West.

3. Manuscripts and autographs of early physicians.

4. Old diplomas and other documents of a medical character.

5. Proceedings of medical societies.

6. Reports of hospitals and other medical institutions.

7. Catalogues and announcements of Western and Southern medical colleges of all "schools."

8. Biographics and portraits of Western physicians.

9. Information and material of any kind pertaining to medicine and medical men and affairs in the West and South.

10. Curios of a medico-historical character.

All contributions should be sent in care of the Librarian. In view of the fact that we are performing a labor of love and have no funds, our friends and associates will readily understand why all contributions sent by express or freight should be prepaid so that no expense may accrue to the Association. The necessary expenses of the Association are at present being met by voluntary contributions of its organizers.

May we count upon *your* active help and support? We would like to hear from every member of the profession who is interested in the proposed work.

C. A. L. REED, M. D., *Chairman.*

OTTO JUETTNER, M. D., *Secretary.*

A. G. DRURY, M. D., *Librarian.*

710 West Eighth St., Cincinnati, Ohio.



## Progress of Medical Science

### MEDICINE.

Conducted by

T. B. COOLEY, M. D.

**Blood Cultures in Febrile Diseases.**—KIRALFY reports an interesting series of observations on 80 cases in which blood cultures were made. Sixty of these cases were acute infectious diseases, while the other twenty were cases of various kinds during the course of which fever of obscure origin occurred. In these 20, cultures were negative in all but two, the fever being due to other causes than bacterial toxins. Inasmuch as the occurrence of bacteriemia in the course of chronic diseases makes the prognosis graver, KIRALFY thinks such negative findings may often be of value. Of the cases of acute infectious disease, 54% gave positive cultures. Of these, the cases of typhoid fever, septiceimia, and the group comprising endocarditis, chorea and infectious arthritis were of particular interest. Of thirteen cases of typhoid ten gave positive cultures. Of the other three, two were in a late stage, where positive results were not to be expected, and one gave no Widal reaction, and the diagnosis was uncertain. Several gave positive cultures some days before the Widal reaction appeared. One case giving typical clinical appearances of typhoid was recognized as pneumonia by the finding of the pneumococcus in the cultures; 80% of the cases of septiceimia gave positive cultures of the pus organisms or Fraenkel's pneumococcus, and these cultures were of some value in differentiating from typhoid. Of special interest in the endocarditis and arthritis group was the occurrence in several cases of the pseudo-diphtheria bacillus.

Aside from the values of the blood cultures in differential diagnosis, KIRALFY thinks that the frequency of positive results in comparatively mild cases shows bacteriemia to be much less ominous than was formerly supposed.—*Zeitschr. fur. Klin. Med.*, Vol. 68, p. 401.

**Chronic Appendicitis in Children.**—COMBY thinks that this condition is much more common than is generally supposed, and that while usually the diagnosis is not made unless an acute exacerbation calls special attention to the appendix, careful observation on the part of the physician may lead to earlier recognition of the trouble, and consequently an earlier cure. He reports having observed over 120 cases of chronic appendicitis, which form the basis of this article.

The etiology is often vague. The disease may occur in well nourished children, without previous intestinal disease, and in these some general cause—heredity, family predisposition, etc., may play a part. More often it is seen in children subject to adenoid disturbances, pharyngeal catarrh, enlarged tonsils, adenitis, etc. Most commonly one gets a history of preceding intestinal disor-

ders, especially follicular enteritis, which may be supposed to have left their mark upon the appendix. The infectious diseases in general, and grippe especially, seem often to be important. Carelessness in diet, and over-eating are also etiologic factors. The disease is rare in early infancy, becoming more frequent from the fourth year on.

The symptomatology described by COMBY is very indefinite, embracing practically all the symptoms commonly ascribed to chronic intestinal indigestion in children. It is interesting to note that he believes nearly all cases of "cyclic vomiting" to be instances of chronic appendicitis, and refers to a series of over one hundred cases under his own observation. Mucous-membranous enterocolitis, also, he considers to be a frequent result of appendix disease.

Under differential diagnosis he discusses enterocolitis, cyclic vomiting, which he has already declared to be nearly always due to appendicitis, hepatic and renal colic and floating kidney, all of which are rare in children; salpingitis; unusual manifestations of coxalgia, and some other conditions of similar symptomatology. The deciding point is the abdominal pain with localized tenderness at McBurney's point, which he believes can nearly always be made out by careful examination.

Medical treatment he thinks should not be continued after the diagnosis is made, as the interval operation is safe, and will almost certainly save the patient much illness.—*Arch. f. Kinderheilkunde*, Vol. 50, p. 138.

ALSBERG, in the same journal, gives details of seventeen cases of appendicitis in children. He doubts any such connection with angina as is often assumed, but does note an apparent relation to influenza. He is also doubtful regarding any special relation between diet and appendicitis. He emphasizes, however, the importance of infectious enteritis, especially follicular colitis, in the etiology.

He thinks that too little attention is given to possible appendicitis in childhood; that vomiting and abdominal pain are too often slighted, and that laxatives are given too often and too carelessly in such conditions.

He calls attention to the difficulty in diagnosis in young children, mentioning especially, besides other conditions discussed by Comby, right sided pneumonia and cystitis. He thinks the flexed position of the right leg is often a help in diagnosis.

Like Comby, ALSBERG places little reliance on palliative treatment, and believes in operation in almost all cases.—*Arch. f. Kinderheilkunde*, Vol. 50, p. 252.

## SURGERY.

Conducted by

C. S. OAKMAN, M. D.

**The Role of Heart Massage in Surgery.**—

"Heart Massage" means the "manual stroking, rubbing, or kneading of the organ either by (a) costal resection, (b) through an incision in the diaphragm (transdiaphragmatic), or (c) with the diaphragm interposed between the hand and the heart (subdiaphragmatic)." C. S. WHITE, of Washington, offers this definition and deplures the use of the term by heart specialists to denote a system of gradual cardiac exercise. Forty-eight cases of heart massage are tabulated, with two added from the author's own experience; of these, ten patients recovered, eight of them by subdiaphragmatic, and two by direct massage. Moreover, in fourteen other cases of the fifty, massage resulted in a resuscitation lasting from one-half to 24 hours. In every case the massage was accompanied by artificial respiration, and usually by other measures. The table covers a period of 28 years, and includes only those cases in which not only respiration but also the pulse has ceased to be perceptible; in other words there seemed to be absolutely suspended animation, for varying lengths of time—usually several minutes. The accident was attributed to chloroform in 35 cases, four were from asphyxia, one each from ether, chloroform and ether, gas and ether, A. C. E. mixture, five were not stated, and in two cases there was no anesthetic, and no cause given. Of the ten recoveries, four were chloroform cases, one gas-ether, one ether, one chloroform-ether, and the rest not stated.

This method of resuscitation will be most frequently applicable in chloroform cases, because chloroform furnishes the greatest number of such accidents, because the abdomen is often already open, affording instant access to the heart, and because the massage is a logical procedure, in view of the peculiar effect of chloroform on the heart.

The failure of the heart in these cases is dependent upon respiratory failure, lowered blood pressure and the direct action of chloroform on the heart. Syncope of the heart, according to recent evidence, is rarely primary in anesthesia, despite a common belief to the contrary. Chloroform undoubtedly has a depressant action on cardiac muscle, but the muscle has good powers of recovery if the poison can be removed. In cases of arrested circulation the only means of removal is by forcible expression of the blood in the heart, allowing freshly aerated blood from the lungs to

enter the left ventricle and coronary arteries. In this way massage is often of value, and accomplishes the cardiac recovery if accompanied by artificial respiration. But this is not the only element of complete resuscitation, because some cases die after a few hours, in spite of restored heart-beat and respiration. If other highly organized viscera, essential to life, are irreparably damaged, the automatic heart action may be of brief duration; for instance, if the medulla is paralyzed too deeply, the respiratory and cardiac centers will not recover and resuscitation is then only transient and deceptive. The cerebrum is easily affected beyond chance of recovery. Other cases, apparently on the road to recovery for many hours, with revived medulla and cerebral centres, succumb to toxic symptoms, probably of hepatic origin.

The choice of methods in heart massage, in the author's opinion, is awarded to the subdiaphragmatic. This has the largest number of recoveries to its credit and is an efficient means, devoid of the dangers inherent in the other two methods. Direct massage necessitates cutting through three ribs and a part of the sternum, and this not only is time-consuming, but also results in a pneumothorax and a collapsed lung, because it is difficult in hurried work to avoid opening the pleura. This of course militates against the very end that is sought—namely the maximum aeration of the blood by artificial respiration. The transdiaphragmatic method consists in opening the abdomen and entering the pericardium through the diaphragm, at the apex of the heart; this can be done easily without injury to the pleura. It seems, however, unnecessary to open through the diaphragm; one hand inserted through an epigastric wound can readily palpate the heart, and with the other hand on the precordial area externally effective massage and emptying of the heart is possible. Thirty to forty strokes per minute are the best to restore cardiac function.

Another prime factor in favoring resuscitation is to lower the head,—the ordinary Trendelenburg position is excellent.

The author has carried out experiments on animals, in addition to his clinical observations and resumé of the literature; kymograph tracings, photographs of cadaver sections, reports of his own cases, and complete bibliography make the article of unusual value.—*Surg. Gyn. and Obst.*, Oct., 1909.

## PATHOLOGY AND BACTERIOLOGY.

Conducted by

C. E. SIMPSON, M. D.

**Staining Blood Smears.**—FISHER suggests a modification of the Jenner bloodstain which is recommended for uniform results and simplicity. The stain is prepared as follows. Take 200 c. c. of a  $1\frac{1}{4}$  per cent solution of yellow aqueous eosin in distilled water and mix with 200 c. c. of a 1 per cent solution of methylene blue, medicinally pure, Grüber, in distilled water. Any of the Grüber blues work satisfactorily. Allow this mixture to stand in an uncovered shallow porcelain evaporating dish for twenty-four to thirty-six hours, protected from dust. At the end of that time filter through a fine-grained filter paper. The residue on the paper is dried in the incubator or oven at  $55^{\circ}$  to  $60^{\circ}$  C. This powder is shaken up with cold distilled water, filtered through fine paper, and washed with distilled water until the washings are a thin, dirty, purplish color. Dry the precipitate on the paper, either in the air or in the oven not above  $60^{\circ}$  C., then scrape off the powder and store in a bottle to use as needed in preparing the fluid. The preparation of the powder may be done by a laboratory supply house. The staining fluid is prepared by taking .2 grain of the powder and rubbing in a mortar with 100 c. c. of acetone free methyl alcohol. Add the alcohol to the powder a drop at a time and allow to stand for three or four days, then filter and add 25 c. c. of methyl alcohol. The bottle should be kept tightly corked to avoid evaporation and consequent concentration. The solution is purplish blue in color and without sediment or precipitate. It will keep indefinitely.

Smears are covered with this stain without previous fixation. After one to three minutes the smear is washed with more of the solution and then in running water, dried on filter paper and examined. The author claims that there is no danger of overstaining by this method. Cells stain by this fluid much as by the Wright and Hastings stains; nuclei are blue, granules of the polynuclear cells are dull mahogany, of the eosinophiles a brighter mahogany, basophilic granules are bluish violet, malarial parasites are stained a greenish blue.—*Medical Record*, Vol. 76, p. 564.

**The Treatment of Sepsis with Bacterial Vaccines.**—From the Massachusetts General Hospital are reported the results obtained from treating several cases of infection with vaccines. The infections include septic hands, laparotomy wounds, puerperal sepsis, etc. In every case the pathogenic organism was determined by culture and in the majority of cases an autogenous vaccine used. The amount of the inoculation varied with the micro-organism and the nature of the infection. The initial dose was from 5 to 25 million, and this amount was gradually increased at each successive inoculation until the maximum of 100 million was reached, though even this was at times exceeded.

In determining the frequency of inoculation in general infections a rise in temperature following a drop was taken as an indication to reinoculate; in other cases the inoculation was repeated every fourth day. Following an unusually large dose there would sometimes occur backache, headache, or even chills and a rise in temperature.

Brief case histories of several patients are added. Of eighteen cases of puerperal sepsis all recovered; fifteen of them showed streptococci from the cervix in pure or nearly pure culture. Twenty-two cases of septic laparotomy wounds are reported. In some where the wounds had remained stationary for some time improvement seemed to follow immediately after the vaccine inoculations. Forty-one localized conditions of septic hands and fingers, some of the lower extremities, and a few of the head and neck, were treated with vaccine. All recovered. In the instances where the infection was deep-seated, such as tendon sheaths and the fascial planes of the lower extremities, the vaccine did not seem to accomplish much. Six cases of empyema and four of osteomyelitis were not benefited.

From these cases the writers conclude: 1. That bacterial vaccines should be further employed in puerperal infections which do not immediately respond to routine treatment. 2. That bacterial vaccines are of much value in that type of sepsis which has remained stationary for some time.



## LARYNGOLOGY.

Conducted by

J. E. GLEASON, M. D.

**Further Contributions to the Pathology and Therapy of Ozena.**—SCHOENEMANN formerly published the opinion that ozena represented a disease of the nasal mucus membrane similar to an eczema upon the skin. Further observations have shown that not infrequently do ozena patients suffer from such a skin condition. The internal or, better still, the subcutaneous use of arsenic in the largest possible doses without doubt exerts a favorable influence for a permanent improvement of ozena. To be sure such medication can not supplant wholly the local treatment. In two cases, furthermore, SCHOENEMANN wrongly diagnosed a suppuration of the antrum of Highmore. In these cases, after a broad opening had been made through the canine fossa, the antrum was found to be healthy, but the ozena nevertheless afterward took on a milder form with a tendency toward healing. If such a broad opening into the maxillary sinus acts favorably in genuine ozena (that is, where there is no sinus disease), it may be advisable to always begin the treatment of this disease with such a procedure. This is offered as a suggestion.—*Proceedings of the German Laryngological Association. Monatschrift für Ohrenheil*, Heft. VIII.

**Alcohol Injection of the Superior Laryngeal Nerve in Tuberculous Laryngitis.**—Stimulated by Schlosser's success with injection of alcohol for neuralgia, HOFFMAN has used the injection for the pain of swallowing in laryngeal tuberculosis, after Braun and Valentine had earlier employed a similarly made injection of cocain solution for a transient anesthesia in intralaryngeal operations of short duration. The patient is placed in a horizontal position. The thumb of the operator's left hand forces the larynx to the side upon which the injection is to be made, bringing that side plainly into view. The index finger of the same hand is pushed into the space between the thyroid cartilage and the hyoid bone, and locates the most sensitive spot. The skin having been previously carefully disinfected, the needle of the hyperdermic syringe is entered exactly over this tender area. HOFFMAN pushes the needle perpendicularly to the surface to a depth of  $1\frac{1}{2}$  cm. The needle is then carefully moved until it comes into contact with the nerve which causes the patient pain radiating to the ear. Injection is then made

of a warm solution of 85% alcohol. For later success, this injection must cause the patient a severe pain in the ear. The needle is then removed, and a collodion bandage applied. Untoward results are never seen. The patient is immediately after the injection able to eat solid food without complaint. The duration of the analgesia is different in different cases, varying between six and forty days. HOFFMAN considers this procedure worthy of commendation.

In the discussion of the above subject, Avellis stated that, since his own results with the injection of alcohol were not altogether satisfactory as regards duration of analgesia, he had resected with an interval of nine days both superior laryngeal nerves in a case of severe laryngeal tuberculosis with slight lung involvement. This procedure is without special difficulty, since in the emaciated condition of the patient the arteries are easily palpable and therefore avoidable. He had also resected the supraorbital nerve for supra-orbital neuralgia with most satisfactory results.—*Proceedings of the Society of German Laryngologists*, Freiburg, May, 1909.

**Atrophic Rhinitis.**—LANGE gives his experience with the treatment of atrophic rhinitis by the submucous injection of paraffin, and summarizes the article as follows. Some of the troublesome symptoms, especially the chronic cough in cases of atrophic rhinitis, have been greatly benefited by the submucous injection of semisolid paraffin. In very chronic cases in which the inferior turbinate is practically absent on account of the disease, or when the mucoperiosteum is tightly stretched over the external wall of the nares, the author does not think that they will be benefited by this line of treatment. He does not pretend to advocate the above over every other treatment, but thinks that in certain cases it is a most valuable adjunct. These cases due to syphilis, to tuberculosis, or to sinus empyema are not cases for this method. The operation is simple and painless, and if done by the Gersung method is free from danger. The operation must be done under strict asepsis; too much paraffin must not be injected at one sitting. The paraffin must be semisolid and the author prefers Gersung's paraffin to which olive oil is added 1-3. Aseptic paraffin injected subcutaneously does not act as a foreign body.—*Laryngoscope*, March, 1909.

## OTOLOGY.

Conducted by

EMIL AMBERG, M. D.

**Injury of the Hearing Organ by Sound.**—DR. U. YOSHII, in his experiments concerning the injury of the hearing organ by sound effects, mentions Wittmaack and says that up to that time one had thought that the pathologic and anatomic phenomena which appear after short intense sound effects (crack, explosion, etc.), consist in the tearing of the membranous labyrinth and of intralabyrinthian hemorrhages, and that these changes constitute the cause for the resulting hardness of hearing. Wittmaack, however, in his experiments with the whistle and hunting gun has come to another conclusion. According to the experiments neither hemorrhages nor tearing of the delicate membranes in the ductus cochlearis result as a direct consequence of the effects of sound, but marked changes in the nervus cochlearis, the ganglion cochleare and the organ of Corti. YOSHII came to the following results shown by microscopic investigations: 1. The continuous adduction of a tone by air conduct is able to cause pronounced processes of degeneration of the organ of Corti and of the nerve-elements without being accompanied by essential injuries of the vestibulum and of the middle ear. 2. That the spots of changes of Corti's organ and of the nerve-elements vary according to the pitch of the tone. 3. That the intensity of the change varies according to the strength of the tone.

YOSHII also made experiments with a sirene. The sirene was blown three or four times strongly in the immediate neighborhood of the auricle. Immediately after the effect of the sound the guinea pig became limp, motionless, and shrank in fright, but it never became unconscious or fell. The animals soon recovered and became lively again. He found first that by this method marked changes could be produced in Corti's organ and in the cochlearis nerves. Second, that the same process can take place in different places, but that a certain pitch of the whistle refers to a certain spot of the cochlea. He also made experiments with one and with repeated detonations.

In a specimen examined after a single detonation he found grave injuries; destruction of the epithelium of sense (in its narrower sense) and of the supporting portion of the organ of Corti. He also found marked changes of the nerve cells and of the nerve fibres. Besides, he found more or less outspoken hemorrhages in the tympanic

cavity, in the perilymphatic spaces and in the neighborhood of the sacculus and the utriculus. An experiment was made by YOSHII by discharging a revolver, the muzzle of which was twenty centimeters from the ear. He found that the changes in the two temporal bones varied. In the one he found changes in the middle ear with rupture of the drum membrane, whereas the labyrinth remained entirely intact. On the other side he found a slight alteration of the cochlea whereas the drummembrane and the middle ear showed no change. He also thinks his experiments allow the conclusion that in changes of air pressure of the same intensity, the lesions of the labyrinth are more grave when the drum membrane remains intact.

He comes to the following conclusions: The injury to the hearing organ by noise effects, be it in man (professional hardness of hearing), be it in animals (experimental investigations), starts in the organ of Corti. Secondarily, the nerve fibers and the ganglion cells are injured in ascending direction. He also found that the pathologic changes which are created in the cochlea, in consequence of purely acoustic influences, namely of the physiologic overirritation of the end-organ and of the cochlear nerves, are distinct from those which are caused by intoxication, infection, etc. He also found that the injured spot in the scale of the cochlea lies lower when the source of the sound is higher. He is of the opinion that we are confronted by transversal and not by longitudinal vibration of the membrane. He concludes that his experiments and those of Wittmaack show that the localisation of the sound waves in the labyrinth, at least in the mechanical final result, can be demonstrated with a certainty in the sense of the theory of Helmholtz, which may scarcely be second to the certainty with which the dust-figures of Kundt can be produced by various tones in their characteristic configurations. He also claims that his experiments, which were made in the laboratory of the Physiologic Institution (Prof. Netzner) and in the otolaryngologischen clinic (Prof. Siebenmann) of the University of Basel have great preference, compared with the experiments of Ewald, in that they were not performed on a model, but directly on the human ear.—*Zeitschrift fuer Ohrenheilkunde und fuer die Krankheiten der Luftwege*, Vol. 58, pp. 3 and 4.

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## Original Articles

### MIND CURES IN GENERAL AND THE EMMANUEL MOVEMENT IN PARTICULAR\*

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It is incumbent upon me in a prefatory way to attempt an expression of the appreciation which I sincerely feel at the great courtesy and and compliment extended me in the opportunity presented to address this organization and an audience of this character. In treating the subject matter of this evening I shall have certain things to say which may encroach upon the favorite corns of my medical brethren and I may come rather close to the sensibilities of many of the audience along lines both religious and personal. I hope that in whatever I may have to say of matters religious or pertaining to the church, because the Emmanuel movement is a church movement, that you may realize that I say it with full respect for all that is religious and all that is churchly.

The matter of mind healing, of psychotherapy, is older than the story of the Garden of Eden. There never has been a time since the human mind began to seek the cause of effects that religion has not been in some way expressed. To the medical man, of course, it is

trite to say that in olden times the priest and physician were one and the same. Whether it was the Priest of Apollo, or the disciple of Esculapius, or the medicine man in Dakota, medicine and religion went hand in hand. Indeed, it is only a few beggarly centuries since the medical man escaped from the cassock of the priest, and it is very much more recently that the surgeon made his somewhat undignified exit from the barber shop where the red stripe on the pole still indicates that the occupant was authorized to let blood, a calling which the barber now feels constrained to keep within the limits of a few mild abrasions upon the bearded face of his victim.

The influence of the mind as affecting the body for better or for worse has been known ever since men have been created and the influences which have acted through one or another sort of mind cure have been identical. These influences have been exercised in only two ways. But it is also true to say that in all schemes of mind cure, whether by scientific therapy, hypnotism, voodooism, or the vagaries of Christian

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Science, these influences operate in but one way, namely, by the establishment of a state of hopeful expectancy. This beneficial state of mind may be induced by active measures such as profound impressions, convincing assertions, repetition of belief and suggestion; or secondly, by a more passive method such as merely waiting for the desired result with longing. The "experience" meeting of Methodist and Christian Scientist furnish examples of the active method. The prolonged prayers and rituals of the orthodox, the reading of "Science and Health," and the reiterative features of Eddyism, tend to set up and maintain the expectant state in the less active manner.

Our ancestors, the followers of Esculapius, had their temples of healing where sufferers gathered and spent long nights and days, hopeful of improvement. It was a sort of worship, a religion, if you please. This is commonly described as the "incubative" plan as distinguished from the active one. Expectant hope is the foundation of all forms of mind healing,—hope, eternal hope.

The Romish church in the middle ages continued the history of mind healing by its pilgrimages and relics and shrines and healing springs. About these shrines and relics and pools were gathered hopeful multitudes seeking help for physical ills. But we do not have to go back to the middle ages to find an example of this kind of healing. Every year from this state and from states lying to the eastward and from states lying to the westward and from sections to the southward, there is gathered a small army of health seekers who journey to the Shrine of St. Anne de Beaupré in Canada, hopeful for the cure of disease; and a certain proportion of them receive benefit. This is not Our Lady of Lourdes in France where, tempered by the distance, we might suppose that conditions may be unusual.

This is right at our doors and there are numerous such places all over the world fostered by the Church of Rome, which do a great deal of good and incidentally do some harm.

This same efficient hopeful expectancy is manifested by its works in a number of cults. The Pilgrim Fathers out of their asceticism and their fanaticism, from which they attempted to flee when they left Europe, but really transplanted to our shores, have probably in a sort of rebound given birth and issue to a number of mystical mind-healing cults.

Something over a century ago the Perkinsonians treated all kinds of disease by the application of an article of wood or metal to the part of the body which was diseased, and many were supposed to have been cured by this application.

And so also came Quimbyism, an exalted form of belief which had some ability to relieve suffering and cure disease. The worthy originator of Eddyism came from the very heart and vitals of New England and gave rise to a cult which has mainly for its purpose the cure of disease, and which has cured disease and which will continue to cure disease as long as people have hopeful expectancy toward that end and faith therein. This is not saying that cases of organic diseases, tumors, cancers, or broken bones, are helped or modified by hopeful expectancy to any great extent.

Now the latest of these New England movements has developed under the very eaves of the Mother Church, but we also have "the new thought;" we have mind cure; we have the revival of that old pagan religion, theosophy, with which Plato confounded the Greeks and even now mystifies the modern school-boy. Those of us who live in the wonderful Porkopolis of the unsalted seas have seen the rise, efflorescence and decline of Dowieism. I step aside at this point to say, after an opportunity of

making an intimate study of Dowie, that any conception of him as a dishonest man, or a mere money-getter is absolutely wrong. Dowie believed that he was an agent of Almighty God; he believed that to him were vouchsafed messages from the Archangels; he was convinced that what he did was done under divine direction; that those who were with him were working with the blessing of God and that those who opposed him were animated by the Devil. He was deluded but he was sincere. Had he not been, the movement which he fostered and built up would never have thriven. When he became palpably irrational his people were able to see his insanity, but they were hardly willing to accept the statement which I was forced to make that every movement of his life had been the natural result of a deluded mind; that their plan of organization, that their Zion Building, all had been the outgrowth of the activities of an insane mind. And see how quickly it has fallen to pieces when the master perished. In the Dowie Church the walls were covered with crutches, braces, trusses and all of the paraphernalia known to cripples; evidences of cures which had been effected under Dowie; cures which had resulted through the hopeful expectancy maintained by his assertions. It is safe to say that many of those who threw away their crutches have since resumed them—but a temporary relief was felt and some real cures were effected.

The physician himself is a mind-healer whether he knows it or not; he has been, is, and always will be. Of two physicians of equal intellectual endowments, the man of a bright, helpful disposition and encouraging nature is very much the better physician, his results are better, his opportunities for doing good are greater because he inspires, whether consciously or unconsciously, a hopeful expectancy of im-

provement.

I remember as a boy being familiar with a number of physicians in the little town in which I grew up. One was a physician who had certain shot-gun mixtures which he gave his patients. They usually did some good and it was hoped they would never do any great harm, and his patients usually got well. He was one of the most cheerful, encouraging, optimistic persons I have ever met. Another man, a very much better physician, better read, with better foundation upon which to base his reading, a scholarly man, made his diagnosis with clearness and precision upon scientific lines, knew what he was treating and the remedies to apply, was a scientific physician; but he was a serious-minded man and the gravity of his thought was reflected in his face so that every trifling case cast over him a spell of gloom in which the patient was submerged. Really those patients of his that were seriously ill and got well, did so because they didn't want to die and hurt the old Doctor's feelings. This mind-treatment of doctors, consciously or unconsciously administered, is an important factor. You know, and I know, and every practitioner knows that there are certain cases where despair has stricken the patient, and that the encouragement, hopefulness, help and strength of the Doctor, tears aside the pall of death and sets the patient upon the upward path to health. This is mind-treatment and the doctors use it. The point I wish to make is that the doctor should use this intelligently. He should understand the full significance of the mental factors in order to get the best results. The question as to whether the priest in the guise of the Emmannel Movement is to come back into the field of medicine and there preempt a squatter's sovereignty where once he enjoyed the rights of eminent domain, is of no great importance, but I think it is of immense im-



portance that doctors should know the neglected forces which they have at hand. The time has come when they should no longer slight their opportunities of intelligently directing those forces.

The very fact that we have these numerous varieties of mental-healing argues very clearly not only that men have minds, and that these minds may be influenced, but that the influence exerted on these minds may be good or it may be harmful. Every patient should be looked upon by every physician as having a physical side and a mental side and that the mental side is often fully as important as the physical side and never should be neglected. Every man at heart is a coward. If you scratch a man a little you will find that he has prejudices and superstitions. If you scratch him a little deeper you will find that he has spiritualities and mysticism; in other words, he is religious. Man is an animal of prayer. We have no reason to suppose that the lower orders pray, but we do not know. Even the criminal believes in lucky pieces and lucky days. Everyone believes that there is something in him, some lucky strain, which will enable him to do things which others cannot do so well. As long as man has lived, from the early days of sun-worship to the present day, man has feared and prayed. All religion is really built upon two foundation stones, one is the hope of better things and the other the fear of worse things. As long as man lives he will be prayerful. I do not know what form his prayer may take, but he will be prayerful. It is an element of his make-up, a part of his mind, the part the physician has to deal with in inspiring hope. Prayer and hope are the same thing; without hope there can be no prayer. Thus religion and mental medicine are intimately related.

Then there is the action of personality. I know a certain number of peo-

ple who adopted Homeopathy because their medicine was pretty and less nauseous and they felt they had an organism which was a little more refined than others. I know a certain number of people who have adopted Christian Science because they felt that the spiritual and mental therapy of that cult is more fitted to their superior composition. It is egotism, a Pharisaical self-love. Yet everyone down deep in his heart feels that he is bound to be a little more lucky than his neighbor. We are all a little bit Pharisaical, a little bit religious, if you like.

This revolt of mysticism from material medicine leads to the increase of these peculiar cults of mind-healing and religion. The medical man has been engrossed with his scalpel and his test tube; he has been pre-eminently materialistic. He has looked upon disease as a laboratory matter. He has neglected the mental and nervous side of the human organism. Doctors have properly shunned metaphysics. Hippocrates said: "Turn not thy attention to metaphysics because the pursuit of metaphysics is as barren as the attempt to carry the milk of a he-goat in a sieve." I don't know how reliable this quotation is, it comes to me by way of Grand Rapids. But metaphysics is not modern psychology. In treating the material side doctors have neglected the spiritual, the mental, the religious side of their patients. Another reason which has turned them away from the pursuit of this subject is the fear of charlatanism. They find in most of these movements people who are evidently there for what there is in it. They find among them certain schemes outside the limits of ordinary reason, claims that are shriekingly irrational, and turn their backs on the whole thing.

Psychology is the word of the hour and subject to much misuse. We know of informal talks by learned professors



to ladies at afternoon teas on the psychology of the masses, the psychology of strikes, the psychology of this thing and that as if psychology would enable them to better manage their domestic affairs or perhaps secure more attention from their husbands. A certain sort of psychology has been taught in all the theological seminaries. They there teach a spiritual element, a Holy Ghost element. This has done very much to prevent a true understanding of psychology.

I am not here to deny that a man has a soul or that there is a Holy Ghost. That is a matter of faith, and belief, and hope, and I am here as an advocate of hopefulness.

Let us clearly recognize that mind is a brain function and that psychology is a consideration of brain physiology. The mind never acts except from an outside stimulus, if it acts normally. If I injure my hand with a knife, I feel it. Do I feel it in the hand? No, because if I cut off the nerve that supplies the hand and then injure the hand I do not feel it. Feeling is a function of the brain. There is no action of the brain without some physical activity. What do you mean by the pallor of fear, what do you mean by the dilated eye that goes with states of terror? Here the mind produces visible changes in the skin and face, but there are numerous and extensive other physical conditions to which I will call your attention later which are associated with mind action and prove that mind and body are in a sense coextensive and mutually dependent.

The Emmanuel Movement has grown out of small beginnings. Dr. Worcester had his attention called to the fact that many suffering with consumption in Boston did not know how to take care of themselves and how to protect others. He organized the young people of his parish into a group for social

work. He instructed them in the proper care of consumptives. They went about, gave instructions and furnished the necessary means for the proper care of consumptives. They did a good work, a work to be proud of, but it didn't fill the pews. To meet other needs and perhaps spurred on by the ever present example of Eddyism, Dr. Worcester adopted a plan of mental treatment which has since become known as the Emmanuel Movement. People who were worried, people in whom sickness, if you please, took a sort of moral turn, people who had doubts as to their worthiness for church life or the life hereafter, people addicted to certain habits or dissipations, were called together in small classes and hope and self reliance infused by encouraging talks and helpful advice. As it is practiced at the present time in Boston the cases accepted for this form of treatment are largely those with a decided moral element in them. But nervous cases were added to this group. Dr. Worcester insists that everyone who comes for treatment must be examined by a physician and obtain a certificate that they have no disease requiring physical or rational medicine and are suitable for the kind of mental support which he gives them. This plan is still followed. Under such control and limitations there can be no fault to find with the Emmanuel Church Movement, but as it has gone out into other towns and away from the guiding hand of Dr. Worcester it has taken on a different phase. In the so-called "church clinics" of Chicago and elsewhere no limitations are put on this treatment, medical control is inadequate or entirely omitted, and grave chances are being taken, with good intentions, no doubt, but with a promising harvest of enduring regrets. In other words, Dr. Worcester has started a movement which he can not control and which is likely to lead the church into difficulty.

They do recognize some limitations. If I were to organize a popular system of mind cure, I shouldn't have limitations. That is where Mother Mary has the advantage. A system of mind cure should have no limitations. It should cure everything, otherwise it doesn't come up to the expectations of the gullible and soon comes to an end.

The conditions in the Church at present are peculiar. Dr. Worcester, in the opening paragraph of the twentieth chapter of "Religion and Medicine," states that "the religious world today is confronted by a very curious condition. We discern a general quickening of faith and a renewal of interest in religion on the one side, and a diminution of the influence of the Church on the other." If you pick up any denominational journal you will find that the attendance at the church of that particular denomination is not satisfactory. You will find that every seminary that prepares young men for the ministry is making more and more strenuous efforts to secure students. The Church does not appeal to young men as it did some years ago. I have seen the advance sheets of the October Delineator, which is a publication acceptable to everyone I believe. It is largely given up to the question, "What is the matter with the Church in America," with articles supplied by many prominent divines. There is not a single denomination that is satisfied with the present condition, unless it be the Catholic.

When I was a boy in a small town, the Church furnished the social, the religious and the gossiping features of the place. Since that time, under the influence of the bicycle, the automobile, golf, and the silent devotion of bridge, church attendance has fallen off. The distinction between denominations has largely diminished. I remember as a boy that Methodists were looked upon with pity because they were not Pres-

byterians, and vice versa. The innate lust for strife was appeased by the cudgels of religious contention. Religious discussions furnished mental activity. Except in small communities the Church is no longer what it used to be. The Church is in a transitional stage. I do not undertake to say exactly how or why; the fact is everywhere admitted. The people who are now being helped by the Emmanuel Movement in a few years will have tired of it. The Church will have lost in grace, its prospects for doing good will have further diminished.

In order to estimate the physical benefits of hope and cheerfulness and the potency of the expectant state, let me take you into a psychological laboratory and make a subject of you. After the novelty of the situation has worn off you are placed in a chair and your arm is encased in a hollow receptacle from which the air can be withdrawn and replaced; connect this with a recording instrument. After the slight excitement has subsided and the subject becomes accustomed to his surroundings, he is directed to remain passive, in a negative state; and the amount of air in the apparatus remains stationary. Then an emotion, merely a pleasant feeling, may be aroused in him. Immediately the recording instrument shows that the air is being driven out of the receptacle in which the arm is placed. You have merely felt like smiling, you have only experienced a pleasurable tone of feeling, but your circulation has been changed in such a way that it can be detected by the apparatus in question. By producing a smile we improve the circulation of not the arm alone, but of all the body.

Invert the test. Prick the subject with a pin, say something displeasing to him. The opposite is the result. With this condition of reduced circulation you find a corresponding mental condition, and

you can prove it in the psychological laboratory by the apparatus in question. Pleasure means good circulation, fear means bad circulation. Such results are invariable.

Apply this in sickness. Make the patient feel cheerful and you improve the circulation.

Seat your patient as before, go through the same formula, attach to his chest the pneumograph registering the movements of respiration, and with a thought of laughter you will find that he is breathing more deeply. Pleasure, hope, produce better respiration; therefore in many cases of depressed patients we often enforce deep breathing exercises.

Take a trained athlete. Give him an instrument to measure the strength of his grasp. He does his utmost and registers 120. Have him repeat it five or six times in succession, make an average of his strength registration, which we will say is 122. Cheer him up, tell him something pleasant, establish a tone of cheerfulness, and his strength is increased and it so registers. Pleasure, hopefulness, confidence, increase the muscular strength, improve the circulation, widen the chest, deepen the breathing.

Lately we hear a great deal in the medical profession about the arterial pressure. At about 40 the arteries get a little hard, a little bit of a snap develops as the valves close at the base of the heart. Determine with an appropriate instrument the amount of pressure that is required to stop the flow of blood in the arm. Cheer your patient up a little and you will find that the arterial tension is lessened in such a way that the circulation is going on with greater ease. With the old, crabbedness, peevishness, forgetfulness, cat naps and insomnia are common conditions. The person who keeps smiling and keeps young, keeps the arteries young; and the condition of the arteries

is the only true test of age. Consider the attitudes of melancholia and mania. Note the association of cramped postures, high arterial tension, poor surface circulation, shallow respiration, bad skin action in the depressed condition; the wide gestures, low arterial tension, active skin and muscular strength in the exalted mental state. Bodily states and mental states are closely allied. Control one and you go far toward the control of the other. This is rational psychotherapy, this is a proper use of psychology. In a score of other ways we can actually demonstrate the intimate and invariable association of mind and body, of mental action and physical function, of emotional tones and secretory activities. Can this fail to be of importance in the correction of organic disease processes, in maintaining the sum total of the powers of resistance against infections; yes, even in the prolongation of life?

The nervous and depressed, in addition to the use of medicine and physical and psychical treatment, must have mental guidance. It is important to have these people do something, to get them interested in outside occupations and in proper objects of affection, to get their hands busy with work. Divert their attention from themselves, break up their introspection, make them act and react upon their environment, but always strive to implant hope. In this way you dispel morbidity.

Frequently, as a form of mental treatment we have to resort to isolation. We must take the daughter away from her mother, the wife from her husband. A man comes home feeling badly, doesn't hesitate to kick the dog or scold his wife, although thoroughly in love with her. At home we give way to our morbid feelings before our wives and mothers. It is important in many cases to utilize the element of isolation. It changes the mental atmosphere and fos-



ters self-control, sometimes only by the pride of appearing well before strangers. I will illustrate with a case. A young girl of nervous tendency had a very affecting experience at the time of her mother's death. A few months later this girl became decidedly ill, lost her sight, lost her hearing, lost her ability to swallow, was supposed by some to be dying of brain tumor. It was decided to isolate her; her father and sisters were kept away from her. It was a cruel thing to do. It was a heartrending thing to do. The only way of communicating with her was to trace the letters upon the palm, the only way she could take any food was by the stomach tube. She was absolutely blind, and she did not improve. The physician one day found her in tears and taking her hand found in it a little miniature of her mother. She had not only been isolated from home, parent, sisters and friends, but her clothing and toilet articles had been changed. The only physical link which connected her with the old conditions was this little miniature of her mother. It was

removed. Two nights later she called the nurse because she could see the street lights. Briefly, in three months she was taking special courses in the University of Chicago. It was mental treatment, psychology intelligently applied.

The successful psychotherapist is born. It doesn't matter how intellectual a physician is, if he doesn't feel sure of himself he cannot administer psychotherapy with any degree of success.

Let us recognize the fundamentals underlying these numerous pseudo-religious movements, the potency of cheerful mental attitudes and the state of hopeful expectancy. Winnowing the real grain of truth from the whirlwinds of chaff, let us give our patients the help they require and which they usually have sought in vain at our hands. Then psychotherapy will come into its own and the false gods be toppled from their hollow pedestals. I preach the religion of cheerfulness. I am devotedly thankful to the man who has scattered broadcast throughout this land the little placard, "KEEP ON SMILING."

#### **The Early Diagnosis of Lead Poisoning.—**

In the diagnosis of plumbism in addition to the other ordinary diagnostic methods discussed in the text-books there is another simple measure which is of no small value. If a small portion of the surface of the skin be painted with a solution of sodium sulphide, or, for that matter, any other alkaline sulphide, it will immediately turn black or gray because of the presence of the lead which is being eliminated by the skin. This is of considerable diagnostic importance because this appears very frequently before any other manifestation and sometimes long before the characteristic blue line is seen on the gum. This should be of value to the physician, as it will not only corroborate other findings, but will also enable him to make a diagnosis very much earlier than otherwise.—*Practical Therapeutics.*

**Turpentine Stupes.—**Turpentine stupes merit more frequent use than at present obtains—a fact no doubt due to error of application, and in consequence uncertain, if not at times unpleasant effects. In the preparation of stupes the temptation is to put the turpentine into the water in the basin. The result is uncertainty, if not defeat of effects. The medicament swims on the surface, and when the water is agitated clings to the free rim of the basin above the water. All these disadvantages are overcome by dropping the turpentine (from five to ten drops only) on the flannel cloth and pressing it gently between the palms a few times, after first wringing the cloth from water as hot as the hands will bear. By this method there is no loss. The requirements of the most delicate infant or resistant adult can be met with certainty. In the former, and all stuporous patients, the effect of such applications should always be watched with care.—*Medical World.*

## THE PHYSICIAN AND THE CAMPAIGN AGAINST TUBERCULOSIS\*

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In the discovery of the tubercle-bacillus and the further acquisition of knowledge concerning the conditions favoring its transmission and development, medical science gave to the human race the armamentarium by which it may defend itself against its greatest enemy and eventually rout it utterly. It was inevitable that such knowledge should not remain the especial property of medicine, but that, as soon as the human mind had grasped its full import and came to realize that tuberculosis and the majority of the ills of the flesh were not mysterious or blind dispensations of fate or providence, but were due to living parasitic organisms reproducing and developing according to definite laws, society at large must take cognizance of the fact that it could now wage a rational fight against the common enemy.

On every hand we see evidences of such an awakening in the public mind. The daily press devotes columns to the consideration of disease, and the fight against it, special articles on the same lines occur repeatedly in the popular magazines, lectures and exhibits carry the same messages to thousands, and there is an increasing demand for the introduction of more medical matter into our public school text-books and for the proper teaching of the same. Among laymen we find organized societies and associations for the combat of disease; through the influence of such organizations we see state legislatures passing laws aimed at the restriction or extermination of disease.

And in many other ways the ancient veil of mystery surrounding all things medical is being torn away, and what medicine once would have regarded peculiarly as its own has now become the common property of the layman.

Such is the tremendous transformation occurring in medicine. From a cult professing especial gifts and knowledge in the art of healing, it has become a science that relegates healing to the background in favor of prevention. Through its teachings the layman now knows that for the majority of the infectious diseases no cure in the old sense is possible, but he has learned also that prevention is possible. If he be not wholly a fool he will demand prevention rather than seek a doubtful or impossible cure. Of what use is the discovery of the tubercle-bacillus if cognizance is not taken of all that such a discovery implies! Medical science is, of course, wholly responsible for this change of attitude on the layman's part. She has discovered the truth for him and points out the way he should follow. And there can be no doubt that the human race will act, and is acting, upon the knowledge gained through such a discovery.

We may well inquire as to the effect upon the practice of medicine of so vital a change in the foundations of the science. It is inevitable that a complete transformation must take place here also. To the dull and selfish mind, medicine may appear to be selling her birthright in making common knowledge of her

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great discoveries; if diseases are to be prevented and exterminated the noble profession of Aesculapius may at last find no work for the hands of its followers. Their mission will have been ended. As professed healers perhaps, but as *preservers of health* and *preventers of disease*, never, so long as earthly conditions remain as they are. The practice of medicine must undergo a corresponding evolution, it must become a profession having for its aim the conservation of human life and health. The time is rapidly approaching when the physician's clients will expect him to keep them well instead of attempting to cure them after they have become ill. Already in some of our large cities we see leaders in the profession having such a clientele.

The practitioner who fails to realize the great change coming over his profession will be stranded and left behind as the wave of progress rolls on. In the transition period now upon us he should be awake to the change in public sentiment and respond to the demand for a preventive medicine. In all matters of public health and sanitation he should take a zealous part; he should be untiring in his efforts to improve the health-conditions of his locality. He should be foremost in seeking legislation aimed at protecting the health of the community; and in the framing of such laws he should have the position of expert adviser, all laws of this kind being submitted to his critical inspection. In the management of infectious and contagious diseases he should act in accord with modern knowledge concerning them; he should faithfully report, quarantine and disinfect in all cases in which such procedures are necessary. In the medical education of his community he should take the guiding hand. In school inspection, choice of textbooks, courses of lectures, instruction of school teachers, enforcement of school

hygiene he should find a legitimate field of activity giving him rich rewards in the consciousness of duties performed. In the preparation of suitable medical articles for the daily press he should not fear to engage. Who but the properly educated physician should be entrusted with the preparation of such articles? He alone is properly qualified through his especial training. The dangers of medical press-articles prepared by laymen are obvious, and unfortunately have been repeatedly demonstrated in recent years. There is no rational argument against and every argument in favor of the properly trained physician acting as medical writer, editor or critic for the lay press. Indeed, we should maintain that these capacities are included in the function of the physician alone.

In the new medical era approaching, the Board of Health, Federal, State and Local, is bound to become a factor of prime importance, and in the maintenance of such work we are destined to find a large share of our future professional activities. An increasing number of properly trained men will be needed for such work, particularly in the laboratories developed in connection with such boards. Moreover, it is not at all unlikely that we shall see local and municipal hospitals established under the direction of health boards. The signs of the times point to a greater insistence of the ideal "for the common good" than the world has yet seen. In matters of the health, life or death of the people, such an ideal will receive its first practical application and realization. The practice of medicine will evolve into a science of keeping people well. At last medical science has put the human race in a position where it can exemplify the practical truth of the proverbial "ounce of prevention," and a "stitch in time" in so far as disease is concerned.

In the practical working-out of a preventive medicine we shall see the physi-



cian occupied with a definite group of people whose physical condition it shall be his duty to ascertain frequently by examinations at stated intervals. He shall outline the physical life of these clients, advise and consult with them upon all phases of the physical life, aiming to avoid any necessity for treatment or operation, but carrying these out should it unfortunately become necessary to do so. That this is no idle dream of a medical millenium of a far-distant future but is an actual change occurring at the present time is shown in many ways. In our large cities some of our leading physicians are already assuming such a position with some of their *clients*—not patients—but people who are well, and who wish to keep well and to live as long as possible. Even such business interests as the large insurance companies are beginning to take action along this line in instituting a policy of re-examination at stated periods. Such re-examinations mean an attempt to prolong the life of the insured by an investigation of his bodily condition and corresponding advice as to the way he should regulate his life. Can any one believe that in this transformation of medicine there will be nothing left for the physician to do—that his work will be taken from him?

Rather will he have a greater amount of more scientific and dignified work to do! To meet this a greater degree of scientific training in the knowledge of the normal and pathological body, in diagnosis and in preventive medicine will be necessary, and this demand will in turn influence the men who choose medicine for a profession, so that we may expect a still higher class of men in the ranks of the practicing physician. The bitter and disgraceful competition, so commonly seen at present, will disappear in the new order of things. Indeed, I think we may look forward to a time when the physician will be a sal-

aried member of the community—a health-policeman, he may eventually come to be.

Without going further into the exposition of the signs of the transformation of medicine into a science of conservation, I wish to consider here especially one aspect of today bearing upon this change. The greatest movement of the times is undoubtedly the fight against tuberculosis. In this great campaign we see the twenty-six civilized nations of the earth engaged—represented by the flower of their thinkers, medical and laymen. That this great crusade is, to such a large extent, made up of non-medical laymen proves the truth of the contention that I have put forth above, that the race as represented by its leaders has learned the significance of the discovery of the tubercle-bacillus. At the International Congress on Tuberculosis, held in Washington last October, the part played by the laymen—philanthropists, educators, sociologists, engineers, architects, business men, etc.—was an extraordinary revelation. The leaders of the medical profession were also represented there—leaders of the movement, as they should rightly be.

But what is the relation of the rank and file of practitioners to this movement? Are they taking in it their proper parts as leaders of anti-tuberculosis education in their own communities? Is each practitioner seeing that in his town the international, national and state movements are focussed in a local attempt to bring home the anti-tuberculosis doctrine to all the people? It is the last thing that is the most important of all. If tuberculosis is ever to be conquered it will only be through the education of every individual in the community to an active co-operation in the fight. Upon whom but the practitioner should the duty of such an educational campaign fall? Shall it be left to the clergymen, school teachers, lawyers or

officers of women's clubs? And yet in some counties in our own state just such an abandonment of medical duties to laymen is taking place at the present time.

It may be of interest here to relate some interesting facts concerning a two-year's experience in the anti-tuberculosis campaign in Michigan. A year ago last December the Michigan state committee appointed by the general committee of the International Congress met in Ann Arbor to discuss plans for the representation of the state at the congress and for the inauguration of a state anti-tuberculosis campaign. At this meeting one physician was chosen in every town in the state having an average population of 1,500, who should act as a local organizer. One hundred and twenty physicians were thus chosen, and letters sent to each explaining the action and asking local co-operation. After repeated letters, pamphlets, reports, bulletins, etc., had been sent to these local chairmen, at the end of eighteen months only one-third of those chosen for this work have ever responded, and, in the case of the one-third who have, the response has in some instances been but half-hearted. Deaths, changes of address, and loss of letters explain this neglect in a few cases only. With the great majority the failure to co-operate in this important movement must be voluntary.

I should like to analyze here the meaning of this. Are we to conclude that the majority of physicians in the state of Michigan are averse to a state anti-tuberculosis campaign? Are they so far behind the remainder of the civilized nations and the majority of the other states, or are they simply indifferent to the advancement of humanity? Under the circumstances it is hard not to believe this, but still I do not believe it—at least, I do not want to believe it. Indifference may explain it in the case

of a few, but with the majority I prefer to believe that it is the result of a failure to comprehend the great transformation that is coming over the profession and practice of medicine—such a transformation as I have already sufficiently pointed out. I imagine that the case is often like this. A practitioner in a little town up in the state, more or less cut off from the influence of wide movements like this, and being more or less in professional isolation or competition, receives a letter from a committee, the members of which may be but slightly known to him. This letter requests his active co-operation in a movement to which he may have given but little thought, and, indeed, may not have formulated his own ideas concerning it. He is asked to form a local committee, call a public meeting and organize a local anti-tuberculosis campaign. If he is an older man and has not been reading widely, such an appeal will have little meaning to him and he casts it aside as he would any other appeal to his time and charity. He cannot be bothered by it, because he does not realize the significance of the movement.

To another man the appeal to organize is distasteful because it will make him "too prominent" in the community. He will be accused of self-advertisement. Good, but mistaken, men have given me this excuse. This is a pathological exaggeration of old and useful ethical principles, that had better be disregarded utterly if they lead to such misinterpretations. Call it advertising, if you will—then it is legitimate advertising, and no man can be too prominent, be he sincere, in the interests of his community's welfare. And it is the good man of the profession who should take the lead in such public medical matters. I say again, if the practitioner does not, then the minister, lawyer, teacher or Madame President will be doing it, and the medical man will have lost his own



birthright. For these things are bound to come, and his indifference or neglect will not hinder the march of events.

Another common excuse, and the weakest of all is, "I'm too busy." We all know the significance of this and how much regard to give to it. It is the busiest man who can accomplish the most for the community. No man is so occupied that he can not do *something* outside his purely professional work. If he is, then he is trying to do that which he should not do, and if he cannot find time for the higher duties of his profession then he, too, will eventually be discovered by the layman, and left behind. The more intelligent laymen of a community will quickly resent the failure of the profession to initiate movements aiming at the elevation of the health standard of a community. I have had numerous letters from laymen throughout the state complaining of the indifference of physicians to the anti-tuberculosis movement. One case may be related to illustrate this point: A woman very prominent in her section of the state expressed herself as follows, "What is the matter with the doctors? In our county we gave them the first opportunity to begin anti-tuberculosis work. After repeated requests to do something nothing was accomplished but the formation of an inactive committee. We then went ahead and established a successful local society ourselves. After raising enough money to engage a trained visiting nurse, and while we were making our plans to do this relief work, I was called up by one of the physicians who said that the local physicians had now decided to take up the anti-tuberculosis work and would like to co-operate with the association. I replied, 'You may come in or not, as you like, doctor, the work has been successfully started without the help of the physicians, and it can be so carried on.'"

Such a failure of physicians to be equal

to the demands of the times is bound to work disaster to the profession. There is, I am sorry to say, among many laymen, a growing feeling of resentment toward the practitioner as he appears to them today—a man who makes of the noblest profession simply a means of getting money. We hear complaints of his purely business-like treatment of his clients, of his failure to give out the moral and spiritual help that under the circumstances of disease or death can be given best by the wise physician. The growth of such dangerous movements as Christian Science, the Emmanuel movement and other forms of mental and faith cures is, I believe, chiefly the result of the practitioner's failure to meet certain needs of his clients. Otherwise we should be spared the disgrace today of having clergymen tell us that while we may be able to make a diagnosis, they can treat certain cases better than we. As a result legitimate medical practice is the loser, and the untrained and inexpert preacher wanders into fields wholly outside his own especial province, and is soon lost in the unfamiliar and dangerous ground. And we are largely, if not wholly, to blame for this.

Last winter two bills were presented to our state legislature, that were widely opposed by the practitioners of the state, the Optometry and the Nurses' Bill. But both these bills were passed. At the same time the State Anti-Tuberculosis Association was making efforts to secure the passage of its tuberculosis bill. I had occasion to write and to talk with many legislators. One conversation was particularly illuminating. Referring to the optometry and nurses' bill one law-maker said "they would be passed, because we'd like to do some thing that the doctors didn't want." Fearing for the tuberculosis bill, I asked as to its probable fate. "It will be passed," he replied, "because we know



ourselves that it's a good thing, and because we know other people favor it, not because you doctors want it." Such a disclosure of such a frame of mind toward the medical profession came as a shock, but I have repeatedly found evidences of its existence elsewhere. It is probably true that the passage of the tuberculosis bill was not wholly the result of the influence of the profession, but to a very large extent of the numerous petitions and letters sent in to legislators by laymen. Here we must acknowledge our indebtedness to the Michigan Federation of Women's Clubs. Physicians proposed and fathered this law and a limited body of physicians worked hard for it, but they alone might not have succeeded in getting it passed. On the other hand I have personal knowledge of but two individuals expressing themselves as opposed to such a law, and these two were practitioners.

I would not in any way seem unfair to any part of my profession in this matter. It is true that there is also another side to it. With some physicians there is a reaction of disgust at the treatment they think they have received from laymen. After honest intentions and efforts to teach their clients they find them turning away from their teachings to false gods, patent medicines, osteopathy, psychotherapy and allied fakes of all kinds. Often the honest instruction of a patient with regard to his condition and regulation of his mode of living has frightened the client or induced him to seek other more comforting practitioners, usually ignorant or dishonest in their methods.

Particularly in the case of tuberculosis have some physicians come to believe that it is best not to inform the patient of the true nature of his condition. Previous experience has led them to fear the loss of such a client. They expect him to be frightened, and to go to some other physician who will give

him an assuring, though dishonest, diagnosis. Nothing can be more disastrous to the patient and to the success of the movement against tuberculosis. If the infected person is to recover he must have knowledge of his condition; if the members of his family are to be properly protected they must also know the exact state of affairs. At this stage of transformation of medical practice the physician must necessarily be altruistic, realizing that "human nature" so-called, explains the action of individual laymen under such circumstances. The stricken man will grasp at every straw, he will give himself over to many an illusion, and it is but natural that he should do this.

Many physicians speak with bitterness of the treatment they have received in this way from their clients, and have become too discouraged to take up educational work again. Such a state of mind we find naturally more frequently among the older physicians. Nevertheless there is a constantly growing class of educated laymen who act willingly and faithfully upon the advice of their physicians. There is certainly a great change abroad in the land in regard to this very point. Practitioners who have suffered in this respect (and who has not, in individual instances at least?) will find less and less of it in coming years. To the practitioner there will come great compensations in the altered attitude of the laymen—the practice of medicine will be made much more pleasant, satisfactory and scientific. The new relation of the practitioner as medical adviser in the true sense of the term will in every way be more grateful than the present unsatisfactory one as a healer.

Without going further into detail it is evident that the rank and file of the profession has not as a body grasped the significance of the modern movement in medicine, and that many prac-

tioners do not fully realize the higher duties pertaining to their profession. Undoubtedly it takes some time for such ideas to permeate through all the strata of the profession. At the top we have the leaders in medical thought urging on the day of a preventive medicine, and the great campaign to be fought at the present for this ideal is that against tuberculosis. This campaign cannot be successful and tuberculosis will never be exterminated until every man, woman and child in the country is made to understand the significance of tuberculosis and the means of its prevention. Such an education is bound to come, whether the practitioners bring it about, or not. But I want to say again that the proper person to bring about such a medical education of the public is the *physician* and *no other*. It is an essential function of medicine, and, thereby a duty obligatory upon every follower of the profession.

We must be true to the highest ideals of the profession, and we must adapt ourselves to the change in these ideals and the new duties consequently laid upon us as the result of the application of the great discoveries of modern medical science. It should not be said of any one of us that our noble and lofty calling with its greatest of responsibilities is degraded to the status of a pure commercial pursuit. The man who would do this should be forbidden by law to follow the calling.

No one can be such a power for good in the community as the physician who follows the highest ideals of his profession. He comes into closer touch with life; the mainsprings of human action and the foundations of human character are revealed to him as to no other man. The influence of such a man may be tremendous, and he may by his energy and self-sacrifice reap great rewards of happiness in the consciousness of duties performed.

In conclusion, I would appeal to the profession of the state to preserve its proper place in the medical education of the public and not allow its greatest functions to pass out of its hands into those of laymen. In the State Anti-Tuberculosis Campaign it should have the guiding hand, with zeal and diligence, not waiting until action is forced upon it by the attitude of laymen, but of its own initiative bringing first to the people the great message of modern medicine concerning the prevention of disease. The need for educational work in this state is great. The people must be so educated that they will demand from their legislators an adequate state fight against the disease, which, at present, we do not have. Compare the small sum spent by this state for anti-tuberculosis purposes with the amounts spent by many others. The insurance companies have learned that it pays to spend money to fight tuberculosis: the State of Michigan has not yet become convinced of this fact. To the physician of the state belongs the task of teaching it this important lesson. And in the great task of instruction every practitioner within the state must do his part.

Medicine gave to the world the knowledge that made the anti-tuberculosis campaign possible. Its leaders conceived and gave birth to the great idea of preventive medicine. The rank and file of the profession must care for this child. While it is absolutely necessary for the good of humanity that laymen co-operate with physicians, and that they become educated in many matters formerly regarded as the exclusive property of medicine, the profession must still control and guide all such medical movements among laymen. If not, ethical and intellectual confusion will arise. In the hands of a profession animated by lofty ideals such movements can be guided to a legitimate and glorious culmination for the common good of humanity.

## ACUTE POST-OPERATIVE DILATATION OF THE STOMACH\*

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With the advancement of the X-ray and our knowledge of physiological chemistry and allied sciences, the diagnosis and treatment of gastro-intestinal diseases has been placed on a firm basis. The study of the "living pathology," versus the "dead-room pathology" of former days, as viewed by the surgeon and made possible by modern technique and the advancement of bacteriology, with a fuller knowledge of the bacterial flora of the intestine, have perfected our nomenclature of intra-abdominal conditions.

In the light of newer physiology we have come to regard the stomach as a reservoir, where the food is held and prepared for later digestion and absorption in the intestine. The further knowledge advances the less we are treating the stomach, since it is known that the latter organ is often the first to record disturbances in other regions. When a patient vomits we seek the cause rather than begin treatment toward the stomach. An example of chronic "stomach trouble" is furnished in gall-stones, where relief of the underlying pathological condition causes an amelioration of the gastric symptoms. The same is true in appendicitis and many other diseases.

Since Hilton Fagge<sup>1</sup> first drew attention† to acute dilatation of the stomach many cases have been reported, but it has seemed to me that the disease has not been given as much attention as its frequency and serious nature, if unrec-

ognized, would demand. The more familiar text books give but scant notice to the condition. Osler (*Practice, sixth edition, page 467*), devotes one paragraph in which he mentions it as a rare disease and the prognosis bad. In Billings (*Diseases of the Digestive System*), Riegel gives but little notice to the acute form of gastric dilatation. He says: "Severe rapidly fatal cases are rare," while Hughs (*Practice*) and Hare (*Therapeutics*) fail to call attention to the disease. The literature in the journals has likewise been meager. Among the more recent reviews is that of Laffer<sup>2</sup> who collected 217 cases.

It is the case with a study of the physiology of all organs that we have to resort to the science of embryology to obtain an understanding of their functions. Embryologically, the primitive intestinal tube is composed of the "foregut,"<sup>3</sup> the "midgut" and the "hindgut". (Fig. 1) From the foregut is developed all the tract down to Ochsner's muscle, which is situated just below the common duct, (near the junction of the second and third portion of the duodenum). The function of the foregut, with the products of its derivatives, (liver, pancreas, etc.), is that of the preparation of the food for absorption. From the midgut we get the third portion of the duodenum, the jejunum, ileum, caecum, the ascending and the transverse colon to the splenic flexure. Nearly all absorption takes place in the midgut. From the hindgut is developed the splenic flexure, the descending colon, the sigmoid flexure and the rectum, the portion of the tract used for the storage

\*Read before the Michigan State Medical Society, Kalamazoo, Sept. 16, 1909.

†Fagge is given credit for the first clinical description of the disease although Brinton referred to the condition over fifty years ago in which he described two fatal cases.



and later expulsion of feces and gas.

In acute dilatation of the stomach,

gut, for a portion of the duodenum is also concerned in the expansion.

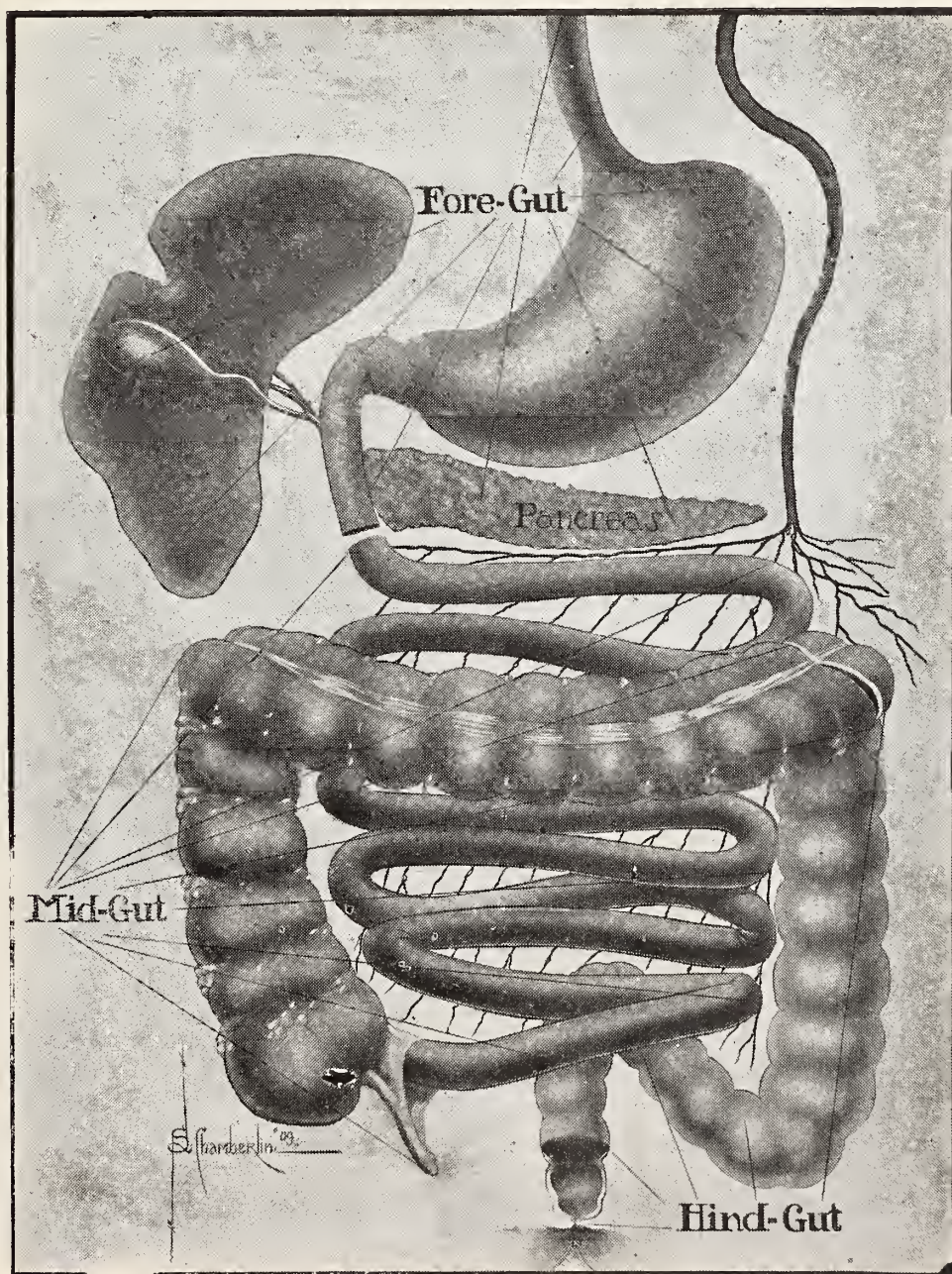


Fig. 1—Scheme of the Gastro-intestinal Tract, illustrating the physiological divisions into foregut, midgut, and hindgut.

from a physiological point of view, we are dealing with a disease of the fore-

That dilatation of the stomach is not alone a disease of man, but that it occurs



in dogs and possibly other animals, I had brought to my attention in the case of a fox terrier, which I observed last June, and of which case I will give a history. The dog, which had not been fed for several hours, was given a few pieces of cold baked potatoes. A few minutes later he took a drink of water when suddenly he became greatly distended, lay down, and cried with pain. He was forced to vomit by entering the fingers in throat. A large amount of gas, some fluid, and the slices of potato, were disgorged. The relief was immediate and he had no further trouble.

I am convinced that acute dilatation of the stomach occurs as a terminal affection in a good many of the commoner diseases. In the dead room it is not rare to find a stomach greatly distended with gas and fluid. Of course this is, in many cases, a post-mortem change, but even when examination is made shortly after death the stomach is often greatly distended.

The following history of a case which occurred during my hospital internship illustrates that we should ever be on the lookout for the condition as a sequel of the more serious diseases.

A patient in the third week of a rather severe typhoid infection, suddenly developed symptoms of collapse with vomiting. The abdomen became greatly distended, pain was severe, the pulse threadlike, cyanosis which had already existed became much more intensified. A rectal tube was passed and the usual treatment for "gas" instituted. A perforation was considered, but the patient died in about an hour.

I performed a post-mortem a few hours later and found a stomach distended and reaching almost to the bladder. (Fig. 2). It contained about five pints of a bile colored fluid. Had the condition been diagnosed early the result would probably have been different.

It is as a post-operative condition that we wish to lay special stress and it is largely from the fact that these patients are usually under observation in an institution, that many of the reported cases come in this category.

Some of the following eight cases I observed during my hospital internship, four have been given me by surgeons and one occurred in my private surgical series.

#### Case Reports.

**Case No. 1.** Mrs. F., age 57, patient of Dr. Angus McLean, anesthetic ether; operation, abdominal exploration. Diagnosis, carcinoma involving omentum, intestines, liver, etc. About four gallons of ascitic fluid were withdrawn and a small specimen taken for microscopical examination. The patient was on the table less than twenty-five minutes. On the third day following operation the abdomen distended, pulse became very rapid and the patient started to vomit. A diagnosis of acute dilatation of the stomach was made and, a stomach tube being passed, about five quarts of a bile-colored fluid were withdrawn. During the following 24 hours the stomach was washed and emptied 14 times. In 36 hours the patient began to show improvement and in 48 hours was entirely free from the gastric trouble. The patient walked out of the hospital on the fifteenth day.

**Case No. 2.** Mr. J., age 29, patient of Dr. Clark D. Brooks, weight 245 pounds. Developed appendicitis and was operated within the first twelve hours. The appendix, which was filled with pus, was removed and the abdomen closed, the operation lasting about thirty minutes. In two days the patient started to vomit, temperature 99 F., but the pulse became very rapid and the patient began to belch air. Examination disclosed a distended stomach. A tube was passed and about one and one-half quarts of bile-colored fluid withdrawn. Following this the stomach was emptied and washed eleven times in three days. Each time the fluid was bile-stained, but there was no fecal odor. A small amount of blood was removed during the second day. The patient made a perfect recovery and walked out of the hospital on the fifteenth day.



**Case No. 3.** Mr. S., aged 35, patient of Dr. Max Ballin, operation appendicitis, no pus. On the third day following operation stomach suddenly dilated. A tube was passed and con-

dural tumor of cord at first lumbar, operated May 26th. The patient did nicely *until the sixth week* when the abdomen suddenly enlarged and the patient started to vomit. A tube was passed and

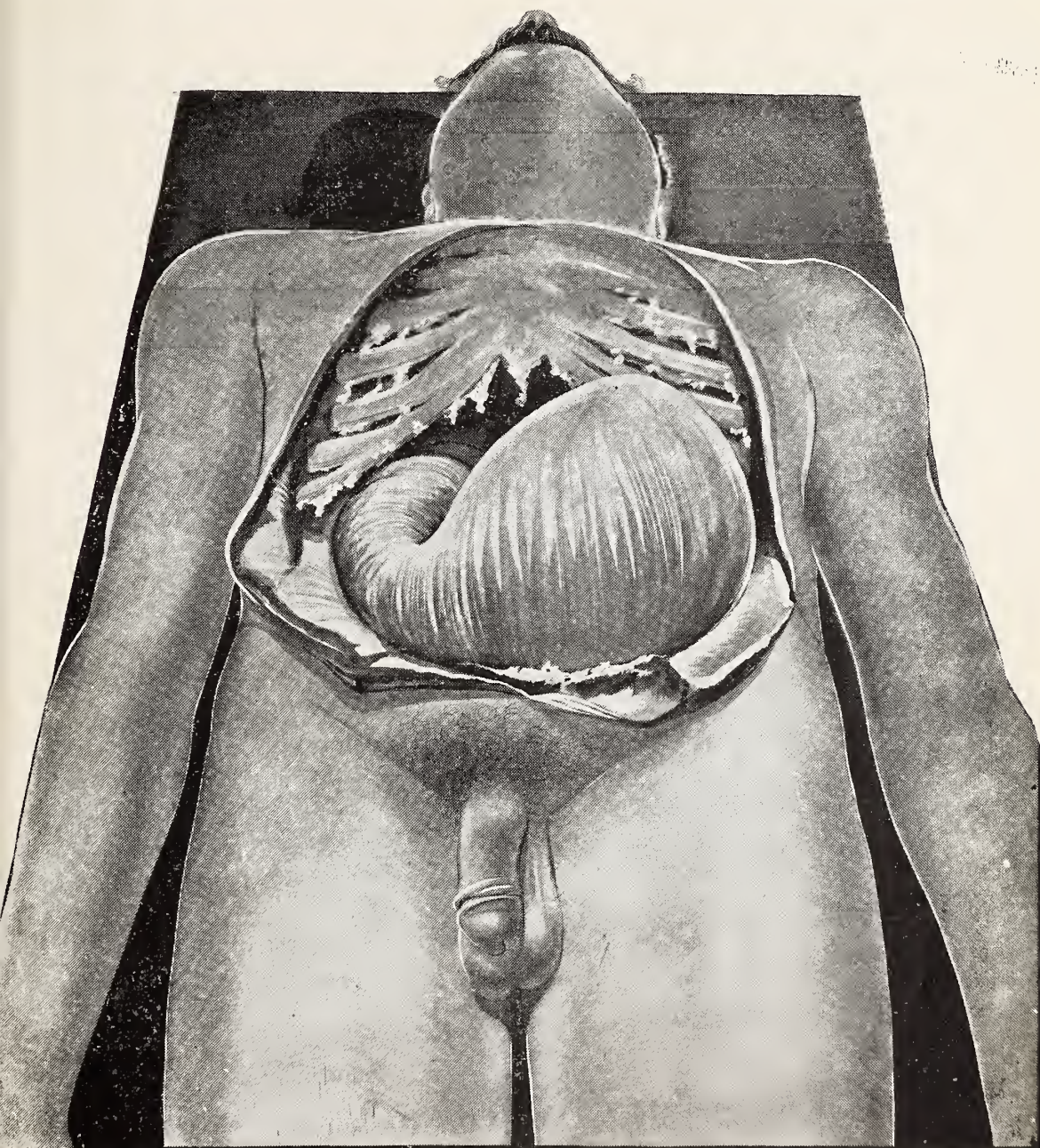


Fig. II—Post Mortem appearance Acute Dilatation of Stomach.

siderable gas and fluid were withdrawn. This was repeated several times in the next few days. The patient made a good recovery.

**Case No. 4.** Patient of Dr. Max Ballin. Epi-

the stomach emptied. This was continued for ten days, about a quart of fluid being removed at each washing. The patient made a good recovery.



**Case No. 5.** Mrs. N., age 34; personal series; abdominal, removal of both tubes; ether. The patient responded nicely and temperature and pulse remained good until the third day, when the abdomen enlarged and the patient began to vomit. There was no change in the temperature, but the pulse became very rapid. A diagnosis of acute stomach dilatation was made and, the tube being passed, about two quarts of bile-colored fluid were removed. The patient made an uneventful recovery and has had no further trouble since.

**Case No. 6.** Patient of Dr. C. Operation, inversion of appendix, and ovariectomy. The patient did nicely until the sixth day when the abdomen suddenly enlarged, the pulse became rapid, and vomiting set in. The stomach was washed out and two quarts of brownish fluid removed. This continued for about seven days when the patient died of exhaustion. No post-mortem was held.

**Case No. 7.** Patient of Dr. Angus McLean. Large ovarian cyst. The tumor was tapped and then removed through a two-inch incision. On the third day following operation the abdomen suddenly enlarged and the pulse became very rapid. A proper diagnosis was made and the stomach washed out; considerable brown fluid was removed. This was repeated three times. The patient left the hospital on the 12th day in good condition.

**Case No. 8.** Patient of Dr. Howard Longyear. Mrs. A., age 28; Alexander's operation on ligaments. Following the operation the patient had little trouble until the evening of the 5th day, when the abdomen distended and the patient began to vomit. The stomach was washed out and the patient had no further trouble until the following night when the procedure had to be repeated. The patient made a good recovery.

### Experiments.

Experimentally the condition can be produced and studied in animals. Our work has been confined to dogs. The animal is anesthetized and a tube passed and a pump applied. The change in the pulse in proportion to the amount of dilatation is beautifully illustrated. The crowding of the liver, lungs, and heart upward and the pressing of the intes-

tines downward toward the pelvis is the same as is observed in the post-mortem cases. (Fig. 3).

The stomach becomes very much thinned out and pale and the veins show very dark. The suppression of urine, as observed in some cases is easily accounted for. The dilatation extends to where the mesentery crosses. The canine stomach does not assume the typical U shape as seen in the human, as the duodenum is not capable of such distention. As morphine and atropine were used previous to the anesthetic no fluid was excreted into the stomach. The pyloric obstruction is more marked in the animal work than is observed in the human cases.

### Etiology.

The etiology is decidedly varied. Various theories have been advanced by authors to attempt to account for the condition, usually based on the operative or post-mortem finding in one or two cases. The etiology and pathogenesis is different in different cases.

In the medical cases the debilitated condition of the patient, especially in pneumonia, typhoid-fever, cardiac diseases, etcetra, in which there is a loss of tone in the muscular wall, produced by the toxic element, undoubtedly plays an important part. The effect of the toxins on the central nervous system undoubtedly plays an important rôle in other cases. The presence of bile and the absence of fecal matter tend to differentiate the case from intestinal obstruction. It further shows that the contraction of the pylorus, either spasmodic or otherwise, is not an etiological factor.

Dietetic errors seem to be an exciting cause in some cases; however, from the class of food partaken of in some cases it can hardly be credited to indiscretions. Mayo Robson<sup>4</sup> notes two cases in which

the eating of a piece of apple preceded the dilatation.

appears to be a factor, especially in some of the milder cases. As the anesthetic

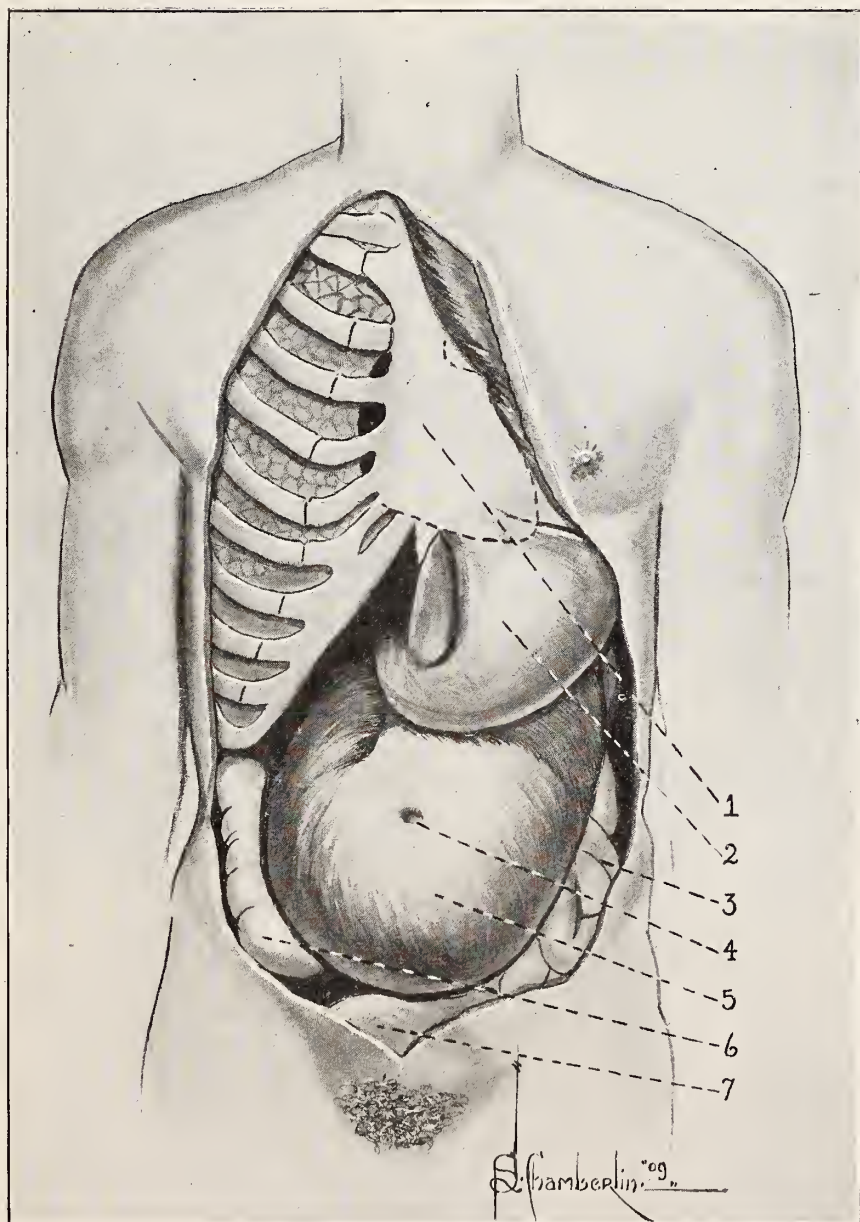


Fig. III—Illustrating the position of the Normal Stomach (2), as compared with the dilated foregut (5); heart (1), intestine (3, 6), umbilicus (4), bladder (7).

In the post-operative cases the anesthetic, either chloroform or ether, agent is excreted largely through the gastric mucous membrane, it is possible

to conceive of an atonic condition of the muscle fibers produced in this way. In other cases the dilatation does not appear until several days after the operation. It is more probable that some toxic agent apart from the anesthetic is at fault here.

Baumler<sup>5</sup> has given the complete emptying of the intestine prior to operations as a factor in the etiology of acute dilatation.

Riegel, quoting Albrecht<sup>6</sup>, says: "The cases of acute gastric dilatation above all with symptoms of ileus (intestinal obstruction) often have their origin in an arterio-mesenteric invagination of the inferior transverse portion of the duodenum, in that the stomach, as it dilates more and more, forces the transverse colon and the loops of small intestine downward toward the pelvis, the mesentery, and particularly the arched folds under which the duodenum enters into the jejunum, become tense, and thus a constriction is caused in the mesenteric artery at the duodeno-jejunal boundary. The vicious circle which is formed by the downward sinking of the folds of the small intestine causes tension in the mesentery which completes the compression of the duodenum."

In most cases, even in those which come to post-mortem, no apparent cause can be discovered, nor can I, from a study of the cases which I have seen, offer anything to the etiology. The dilatation is probably a result, and the cause of the paralysis preceding has as yet to be discovered. I am inclined to the opinion that the motor nerves have been affected by some toxic agent. In the post-operative cases the wounds usually healed by first intention and yet the dilatation in some cases did not appear for days after the patient might be pronounced cured of the condition for which operation was held.

### Morbid Anatomy.

The stomach and upper duodenum which are enormously distended usually assume a U shape (Fig. 2). The wall is naturally thinned out. The color varies with the advancement of the condition. In the typhoid case reported above the stomach was pale, in the latter cases or those which have run a more chronic course it tends to become bluish. The distention usually ends at the duodenum below the common duct or where the mesentery crosses.

### Prognosis.

The prognosis is good and the patient is left apparently without any bad after effects, if the diagnosis is made promptly after the onset of the disease and proper treatment instituted.

In no condition is early diagnosis and radical treatment more imperative. Connor<sup>7</sup> has collected histories of 102 cases, 74 of which died. In some instances the patient died within three hours from the onset of symptoms. In 75% of his cases the duration was less than five days. The time for complete recovery varies from a few days to several weeks, depending undoubtedly largely upon the etiology and severity.

### Treatment.

The passing of a lavage tube as soon as the diagnosis is made is of prime importance. Washing of the stomach with normal saline or an alkaline fluid is highly beneficial. The position of the patient is important. The pelvis should be raised and the head lowered, otherwise it may be impossible to remove all of the fluid.

The knee chest position, or the prone position has been recommended in some cases as beneficial. No food or medicine should be given by mouth for some days, or until the tendency to dilatation



has subsided. Rectal nutritive enema of saline is sufficient to maintain the patient.

Strychnine (gr. 1/30) hypodermatically for its effect upon the gastric and intestinal musculature is undoubtedly of benefit, but the heart usually slows down shortly after the stomach is emptied and the mechanical pressure is relieved. Theoretically atropine (gr. 1/100) would be of value after the stomach was emptied, to stop further secretion. Eserine (physostigmine, gr. 1/100) has been used extensively in ileus and might be worthy of trial in the present disease, although all medication should be secondary to lavage. Surgical treatment has been recommended, but we fail to see any advantage over the frequent lavage. If the condition persists the presence of a high obstruction must, of course, be considered.

Fortunately acute dilatation of the stomach is one of the rarer post-operative complications, but I believe it is far more common than is ordinarily supposed. Undoubtedly the condition occasionally passes unrecognized, even in

our hospitals, and many deaths attributed to other causes (ileus, perforation, etcetera), are caused by the gastric dilatation. The condition but leads us to the cardinal principle that we should examine our patients and not fall into a set routine and trust to standing orders for pain, "gas," rapid pulse et cetera.

Conclusions.

(1) The so-called "acute dilatation of the stomach" is a disease of the "fore-gut" in which the upper portion of the duodenum as well as the stomach is involved.

(2) We should be very cautious in entering the abdomen for ileus when the swelling is in the upper part of the abdomen, without first passing a lavage tube.

(3) We should make an examination of the abdomen in all cases suffering from "gas" after operation, abdominal or otherwise, and not trust to the routine treatment without first making the diagnosis of the parts involved.

References.

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**Compilation of Some Facts Concerning High-Frequency Currents.**—W. Parker Worster of New York says that vibratory electrization by means of high-frequency currents increases internal respiration of the tissues and by dilating the arteriolar hastens the flow of blood into the capillaries, thus increasing metabolism, currents of high amperage give no unpleasant sensations in passing through the body. They deepen inspiration and increase the amount of oxygen taken into the body. They form the best treatment for

neuritis and chronic rheumatism, relieving pain and restoring function rapidly, and are equally good in sciatica, lumbago, and gout. In arthritis deformans pain, stiffness, and soreness rapidly disappear. They are useful for the removal of moles, warts, and small tumors. Many skin diseases yield readily to them; among them are ring-worm. Old ulcers are caused to heal by the use of the effluence. Diagnosis should be made carefully, as in unsuitable cases injurious effects occur.—*Medical Record*, September 18, 1909.

## EPHRAIM McDOWELL\*

FREDERICK C. WARNSHUIS, M.D.,

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Beautifully located near the center of the City of Danville, in a park, which by the subscription of the citizens of that city, has been beautified, is the monument of a man whose operation marked an era in the history of surgery. Kentucky cherishes the memory of many noble sons, but nowhere in her annals can she point to a name more deserving of her pride than that which adorns this monument erected to commemorate the name of Ephraim McDowell, the "Father of Ovariectomy." The achievements of this village surgeon, like the widening waves of an inviolate sea shall reach to the uttermost shores of time, hailed by all civilization as having lessened the sufferings and lengthened the span of human life.

He performed an exploit which no one had ever achieved before, and which, although for a long time denounced and condemned as an outrageous, if not murderous innovation, is now universally admitted as one of the established procedures of surgery. An operation which, in its aggregate results in the hands of different surgeons, has already added thousands of years to woman's life and also rescued thousands of human beings from a premature destruction. No word of mine can add a single laurel to the crown of the immortal McDowell, whose history and services to mankind have been so beautifully and faithfully portrayed.

At the dedication of his monument, Dr. Sayre, then president of the Amer-

ican Medical Association, said: "That in all time to come, the intelligent surgeon either in person or in thought from every civilized globe, will wander to Danville to pay their respects and sense of obligation to the memory of Ephraim McDowell, who contributed so vastly to the alleviation of human suffering and the prolongation of woman's life."

It has appealed to me that in no way could this section of our State Society better honor this man upon this the one hundredth anniversary of his epoch-marking operation than by devoting a few moments of our time at the opening of this section's transactions to narrate a few of the salient features of his life.

We can scarcely comprehend the greatness of this man's mind and his truly wonderful genius until we stop to consider who he was, what he did, and where he did it. A village doctor in the backwoods frontier, surrounded by Indians and buffaloes, almost beyond the bounds of civilization, with no books to refer to, no precedent to guide, no one to consult, unaided and alone, assuming the responsibility of curing a disease which up to that time had been considered absolutely incurable,—such a man is, I believe, worthy of our passing thought, respect, and honor. Among the great men of the eighteenth century not one has more enduring claims to our grateful remembrance than Ephraim McDowell. Dr. McDowell was born in Rockbridge county, Virginia, on Nov. 11, 1771, the son of Samuel McDowell, a land commissioner. Ephraim was the

\*Chairman's address, Section of Gynecology and Obstetrics, 44th annual meeting of the Michigan State Medical Society, Kalamazoo, Sept. 15 and 16, 1909.

ninth son of a family of twelve children. When two years of age, he was brought by his parents to Kentucky. It is not known when he began school. Soon after leaving school he entered upon the study of medicine, his preceptor being Dr. Humphreys, of Stanton, Va., a graduate of Edinburgh University. With him he read for two or three years, after which he entered Edinburgh University, being a member of the class of 1793 and 1794. In the second year of his studies he took a private course of surgical lectures from the celebrated Mr. John Bell. After a residence abroad for two years, he returned to Kentucky in 1795 and settled in Danville, the scene of his future labors. He immediately entered upon his professional career. The fame of his foreign tour served to introduce him into practice. Patients came to him from all parts of the southwest, all the operations that were required for hundreds of miles around were performed for a number of years exclusively by him. At that time he was the sole occupant of the field of surgery in the west. He was a bold and skillful wielder of the knife, and did not shrink from undertaking any of the procedures then in use. He operated many times for strangulated hernia, performed numerous amputations and tracheotomies. In lithotomy he was particularly successful. Up to 1828, he had operated twenty-two times without a death. James K. Polk, president of the United States, was one of the patients upon whom he had successfully performed lithotomy. He was the first surgeon in America who resected the lower jaw, and also the first in removing the parotid gland. He also performed the first Cesarian section in that part of the country.

In 1802, the thirty-first year of his life, Dr. McDowell married Sarah Shelby, a young lady of personal beauty and excellence, daughter of Governor Shelby,

of Kentucky. Eight children were born to them.

Kind-hearted, benevolent, and just in all his dealings, an excellent citizen, an original thinker, a bold, fearless, but most judicious surgeon, six feet of height, of commanding appearance, florid complexion, dark eyes and hair, amiable, cheerful, studious, following the noble vocation of a practitioner of the healing art, liberally dispensing alike to rich and poor the blessings of his knowledge and of his skill, he silently pursued the even tenor of his ways, a faithful servant of his profession. His character, in all relations of life, was most exemplary. He was fond of Latin, Greek, History and Literature. Burns and Scott were his great favorites. He was fond of music and sang a variety of odes and catches in Latin, English and Scotch. His favorite pieces he frequently accompanied with his violin, an instrument to which he was very partial. His library was quite extensive for the period of time in which he lived.

Such, gentlemen, was the man who was called during the month of December, 1909, to see a Mrs. Crawford. The story of the case may best be told in his own words:

### The Story of the Operation.

"In December, 1809, I was called to see a Mrs. Crawford who had for several months thought herself pregnant. She was affected with pains similar to labor pains for which she could find no relief. So strong was her presumption of her being in the last stages of pregnancy that two physicians, who were consulted on her case, requested my aid in delivering her. The abdomen was considerably enlarged and had the appearance of pregnancy, though the inclination of the tumor was to one side, admitting easy removal to the other. Upon examination per vagina, I found nothing in the uterus, which indicated the conclusion



that it must be an enlarged ovarium. Having never seen so large a substance extracted, nor heard of an attempt or success attending any operation such as this required, I gave to the unhappy woman information of her dangerous situation. She appeared willing to undergo an experiment which I promised to perform if she would come to Danville, a distance of sixty miles from her place of residence. This she did, performing the journey upon horseback. With the assistance of my nephew and colleague, James McDowell, I commenced the operation which was concluded as follows: Having placed her on a table and removing all her dressings which might in any way impede the operation, I made an incision about three inches from the rectus muscle, continuing the same nine inches in length, parallel with the fibers of the above named muscle, extending into the cavity of the abdomen, the parieties of which were a good deal contused, which we ascribed to the resting of the tumor upon the horn of her saddle during her journey. The tumor then appeared full in view but was so large that we could not take it away entire. We put a strong ligature around the fallopian tube near the uterus and then cut open the tumor which was the ovarium and fimbrious part of the fallopian tube much enlarged. We took out fifteen pounds of dirty gelatinous looking substance, after which we cut through the fallopian tube and extracted the sack which weighed seven and one-half pounds. As soon as the external opening was made the intestines rushed out upon the table and so completely was the abdomen filled by the tumor that they could not be replaced during the operation which was terminated in about twenty-five minutes. We then turned her over on her left side so as to permit the blood to escape, after which we closed the external opening with interrupted suture,

leaving out at the lower end of the incision the ligature which surrounded the fallopian tube. Between every two stitches, we put a strip of adhesive plaster which, by keeping the parts in contact, hastened the healing of the incision. We then placed the usual dressings and prescribed a strict observance of anti-phlogistic regimen. In five days I visited her and much to my astonishment found her making up her bed. I gave her particular caution for the future and in twenty-five days she returned home as she came, in good health, which she continues to enjoy." Mrs. Crawford survived the operation for thirty-two years.

He wrote with great difficulty and his only literary contributions were two short articles in the *Philadelphia Medical Repertory and Analytical Review* for 1817 and 1819, in which he reported his first five cases of ovariectomy. It is not known how often he performed this operation, but it is positively ascertained that he had performed it thirteen times.

A number of years later an attempt was made to deprive him of the credit of this surgical procedure. A back settlement of America had beaten the mother country, nay Europe itself, with all its boasted surgeons thereof. It is little wonder then that at first they should seek to discredit this man's masterwork, and by various attempts seek to filch from him the glory of his achievement.

Today, however, undisputed evidence is on record whereby McDowell is rightly and undeniably entitled to the honor of being called "the Father of Ovariectomy." Dr. James Johnson, editor of the *London Medical Surgical Review* and one of the more loud and clamorous detractors when the operation was first reported, stated in 1826 in his Journal: "There were circumstances in the narratives of some of the first three cases that raised misgivings in our minds, for

which uncharitableness we ask pardon of God and of Dr. McDowell of Danville."

His fees for surgical operations were regulated, as a general rule, by the ability of his patients. Occasionally his fees were large and in one instance almost princely. In 1822 he performed the operation of ovariectomy upon a lady in Tennessee. Dr. McDowell had agreed to operate upon her at her home for \$500.00. He remained with her for some days and on the morning of his departure her husband gave him a check for, as he suppose, the stipulated sum. On presenting the check in Nashville, he discovered it was drawn for \$1,500.00 in place of \$500.00. Presuming that a mistake had been made, he immediately dispatched a servant to the gentleman, who replied that no mistake had occurred, and that the services he had received more than counterbalanced the sum he had paid.

History recalls and relates how, when McDowell was fifty years at rest, the greatest living surgeons of that day came upon a pilgrimage of one thousand miles and erected the McDowell monument and pronounced at his shrine noble words of praise and esteem.

I would that the magician's wand were granted me for a while to weave a fitting legend at this, another anniversary. A century, one hundred years, have rolled by since Dr. McDowell's operation of ovariectomy and his successful cases have made the extirpation of diseased ovaria a legitimate surgical procedure. The seed that he sowed fell upon meager soil and was slow in ger-

minating. Now and then it is true a blossom shot forth and shed its fragrance in the air, but fully a quarter of a century elapsed before it ripened into vigorous fruit.

The saddest lament in Oliver Wendell Holmes' poems is for the voiceless; "For those who never sing, but die with all their music in them." The extracts which I have read show Dr. McDowell to have been a man possessed of more than ordinary gifts, but he was among the voiceless of the profession. Not until he was at rest fifty years was the just honor that was due him rightly accorded. Dr. McDowell remained faithful to his profession until the last moment of his life. He literally died in the harness on June 25th, 1830, after an illness of two weeks.

An interest in biography as a pastime has convinced me of its value as an educational factor. In the study of the biography of the founders and discoverers of various principles of our profession, one is impressed that the Hippocratic ideals are realized and exemplified in their lives. If, therefore, these teachers can enlighten us as to the darkness that went before and the darkness that is to come afterward, let us hear what they have to teach us, and though we may not as yet perceive any line of research, we may hold that every addition to our knowledge is one small step towards the great revelation. Progress may be more slow or more rapid, it may come to others and not to us; it will not come to us if we do not strive to deserve it. The future of man is full of hope and who can foresee the limits of his destiny?

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## PATHOLOGIC EXAMINATIONS IN THE DIAGNOSIS OF MALIGNANCY. TABULATION OF 2,400 REPORTS

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Malignant growths are clinically manifested by progressive tumor formations, tending to metastasise, accompanied in the later stages by cachexia, and leading almost inevitably to a fatal issue, if untreated. Such growths are either visible, palpable, or concealed; the last class are diagnosticated solely, of course, by symptoms which infer the presence of tumor; the former can be seen or felt and are usually accessible for exact measures of diagnosis, if there is any doubt as to their nature.

As an example of a concealed tumor we mention cancer of the lumbar spine, whose presence, undetectable at any time either by inspection, palpation, or X-ray, was nevertheless diagnosed by the symptoms of progressive, irremediable crural neuralgia, limitation of motion in the lower vertebrae, and the history of a previous operation for mammary cancer; massive carcinoma of the spine was found at autopsy. Visible and palpable tumors occur in every one's experience, such as those of the skin, locomotor system, abdominal and pelvic organs.

That the nature of a tumor, even though visible or palpable, or both, is often in doubt, every one has at times realized. The conditions which must be differentiated from malignancy are benign tumors, inflammatory conditions, tuberculosis, syphilis, actinomycosis, blastomycosis, and a few other special infections attacking the integument and mucous membranes. The deciding diag-

nostic measure must often be a microscopic examination, either of blood smears or formed tissues. Many men, even when satisfied of the diagnosis without aid of the microscope, submit all cases, either before or after treatment, to the microscopist, in order to have a check upon their clinical opinion and to correct the occasional error that will inevitably creep in. Such men often develop surprising acumen in foretelling the exact nature of pathologic processes.

### Classification.

Malignant tumors comprise carcinoma, sarcoma, and endothelioma. It is exceedingly useful to know the subdivisions of these classes, as they vary greatly in their course and symptoms. Of carcinoma, we recognize the following chief varieties:—epitheliomatous or squamous; medullary or encephaloid; scirrhus; glandular or adenomatous. Other kinds are described, but they can usually be classified under some of the preceding divisions, or else are very rare.

The epithelioma springs from integument or stratified squamous epithelial mucous membrane, as mouth, esophagus, vagina, cervix, anus. Being mostly visible or palpable, and of comparatively slow growth, it is often subject to early diagnosis and successful removal. Epithelioma of the lip is a good example.

The medullary form is primarily of deeper origin, as in the mammary gland, and is a particularly rapid type of growth, with early metastasis, necrosis, and ulceration. The adenomatous and

\*On the program of the 44th annual meeting of the Michigan State Medical Society, at Kalamazoo, Sept. 15 and 16, 1909. Not read.



scirrhous forms are generally of lesser malignancy than the medullary.

Scirrhus is most common in the breast, where it may be of very slow growth.

Adeno-carcinoma springs from any tissue which bears glands in its structure, as breast, uterus, or gastro-intestinal tract.

Of sarcoma, we recognize the following principle varieties: Small round cell; large round cell; spindle cell; myeloid or giant-cell; mixed cell; melanotic, and numerous combined tumor forms such as fibro-, osteo-, chondro-, myxo-, angio-sarcoma. The small round cell, and the melanotic forms are regarded as very malignant, owing to rapid growth and early malignancy, while the myeloid and compound growths may be of comparatively low-grade malignancy.

The endothelioma is a tumor springing most often from the endothelial elements of vascular and lymphatic structures. As a rule it is of lesser malignancy than the worst forms either of carcinoma or sarcoma, but at times it evinces a tendency to fast growth, metastasis and stubborn recurrence.

### Differential Diagnosis.

It might seem improbable, at first thought, that visible and palpable growths should ever be confused with inflammatory conditions, tuberculosis, and the other lesions before-mentioned. But when one remembers the doubtful ulcerations of the cervix, of the lip, of the oral cavity, etc., and the frequent grafting of carcinoma upon inflammatory phases, it must be realized that doubt not infrequently arises. Indeed, not only the clinician, but sometimes the microscopist himself is uncertain of the diagnosis, even with the tissue under the microscope. The transition, for instance, from chronic inflammatory lesions, as of the cervix, to beginning cancer, is one of the hardest points for the pathologist to

determine. As a result of this constantly recurring doubt, surgeons who have command of a laboratory submit all tissue for microscopic section.

Tuberculosis in its characteristic form of tubercles, giant cells, necrosis and lymphocytic infiltration, is not mistaken for any other lesion. However, in a small percentage of cases tuberculosis assumes a diffuse mesoblastic type, without caseation or tubercles, making it easily confused with true neoplasms. If this difficulty is presented to the pathologist, it is still easier for the clinician to be uncertain; this is especially true in cases of lymphatic, mammary, tubal, or intestinal lesions, where the manifestations are atypical.

The slow, nodular growths of actinomyces, as seen in the neck and abdominal organs, are occasionally mistaken for tumor, while the ulcerative conditions produced by blastomyces may closely simulate epithelioma, and are undistinguishable, except by finding the budding yeasts that cause the disease.

The gumma of syphilis is sometimes mistaken for neoplasm; the difficulties of accurate anamnesis and the protean forms of the disease render it a fertile ground for error in diagnosis. Not only the gumma, but the cicatricial conditions following specific inflammation, as in the rectum, sometimes lead to a wrong assumption of malignancy.

As to the benign tumors, there is hardly one which is not capable of resembling malignancy. All the clinical factors are occasionally insufficient to establish a differentiation, especially in concealed tumors, such as occur in the cranium, thorax, abdomen and pelvis. Even when a tumor is removed and subjected to palpation, inspection, and gross section, it is possible to overlook certain types of secondary malignant degenerations; for example, the sarcomatous degeneration of fibroids and the carcinomatous change in cysts. It is only the

TABLE I.

	Uterine Curettings.	Uterus (Body).	Cervix.	Ovary.	Other Adnexa.	Vagina and External Female Genitals.	Breast.	Male Genitals.	Bladder and Urethra.	Kidney.	Abdominal Wall and Peritoneum.	Appendix.	Intestines and Rectum.	Omentum and Mesentery.	Stomach.	Liver.	Oral Cavity.	Skin and Appendages.	Nose.	Salivary Glands.	Lymph Glands.	Nervous System.	Bones.	Miscellaneous Locations.	Location Not Known.	Total.	
CANCER—																											
Epithelioma	11	12	18	1	1	1	1	1	1	3	1	1	1	1	1	1	31	31	2	1	5	1	3	6	10	137	
Encephaloid			1	3	3	1	11	17	4	3	1	16	2	2	2	2	3	1	1	1	1	1	1	7	85		
Adeno	12	7	3	3	1	1	29	2	2	5	1	1	1	1	1	1	3	1	1	1	1	1	1	2	34		
Scirrhus		1	1	1	1	1							2	5	1	1	1						1	2	16		
Columnar		3	1	1	1	1					4				1	1	1							2	6		
Papillary																									2	3	
Colloid														1	1	1										3	
Chorioepithelioma		2																								2	
Variety not specified	13	4	5	9	1	47	7	5	1	4	7	2	3	7	2	3	7	2	2		13			8	6	146	
"Suspicious"	5		5																							10	
SARCOMA—																											
Large Round Cell													1	1						1	1	1	1	3	2	11	
Small Round Cell	1												1								2	1	1	3	3	12	
Spindle Cell	2		1	1		1			1				1	1	1								1	4	2	15	
Giant Cell																			1				4			5	
Mixed Cell	1		2	1		1			1				1					1		2		1	3	3	16		
Melanotic																					1					4	
Fibro				1		1			1				1		1						1		1	2	2	10	
Myxo																		1					4			5	
Alveolar				1																	1				2	4	
Chondro									1																1	2	
Lympho																					6					6	
Osteo																							1			1	
Angio																								2		2	
Hypernephroma											4															4	
Variety not specified	4		2	1	1	2	1		2	1	1	2		2							2	1	4	11		31	
ENDOTHELIOMA—																											
Fibro										1		1	2					2	8		1			1	1	21	
Total	45	33	39	19	2	2	111	13	12	7	16	1	34	8	7	11	39	42	3	2	37	7	18	49	50	607	

TABLE II.

	Uterine Curettings.	Uterus (Body).	Cervix.	Ovary.	Fallopian Tube.	Other Adnexa.	Vagina and External Female Genitals.	Breast.	Male Genitals.	Bladder and Urethra.	Kidney.	Abdominal Wall and Peritoneum.	Appendix.	Intestines and Rectum.	Gall Bladder.	Omentum and Mesentery.	Stomach.	Liver.	Oral Cavity.	Skin and Appendages.	Nose.	Salivary Glands.	Thyroid.	Lymph Glands.	Nervous System.	Bones.	Miscellaneous Locations.	Location Not Known.	Unclassified.	Total.
Malignancy.....	45	33	39	19	...	2	2	111	13	12	7	16	1	34	8	7	11	39	42	3	2	37	7	18	49	50	...	607		
Benign Tumors..	1	91	3	7	1	3	5	46	6	5	..	1	...	12	..	..	..	5	11	4	1	8	1	..	2	17	25	..	255	
Simple Inflamma- tory.....	23	20	110	14	75	2	1	7	8	12	31	5	127	44	9	6	5	9	13	13	2	1	41	4	20	59	...	...	661	
Tubercular.....	1	1	2	10	15	..	2	8	13	..	6	3	2	..	..	3	..	..	5	1	..	1	51	1	5	38	...	...	168	
Other Infections.	0	0	1	...	..	1	..	..	1	..	..	..	..	1	2	..	..	..	1	4	3	1	..	3	..	..	...	...	18	
Retrosgressive....	0	11	21	156	3	..	..	..	1	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	...	...	194	
Endometritis.....	194	47	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	...	241	
Pregnancy.....	25	7	..	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	...	37	
No Diagnosis.....	50	26	10	11	13	4	1	2	2	..	..	..	..	11	2	11	3	10	5	12	11	2	2	8	4	7	..	..	207	
Unclassified.....	0	0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	66	66	
Total.....	339	236	186	217	112	11	12	174	43	29	47	36	133	103	9	20	22	26	78	81	12	7	8	141	16	52	163	75	66	2454

microscope which discovers the concealed foci of malignancy in these few cases. The benign growths which most frequently give rise to doubt are probably the fibroma, cystoma, adenoma and chondroma.

The lymphatic enlargements associated with blood diseases, as leukemia, are sometimes the occasion of wrong diagnosis and ill-advised surgery. These malignant tumors of the blood are as yet not amenable to surgical treatment, and the diagnosis is so absolute by means of blood smears that an error is hardly excusable.

### Source of Material.

The foregoing resumé was suggested by an examination of records of pathological sections made during the past seven years at the Detroit Clinical Laboratory. The material has come from many different physicians in many locations. Much of it has been submitted for primary diagnosis, much also for confirmation of a diagnosis already made, and a large part of it simply as a routine examination for the benefit of clinicians who habitually put a microscopic check upon their gross inspection.

It is impossible to state in what proportion of cases the microscope has confirmed or contradicted the clinical diagnosis, because the latter is usually indicated insufficiently, or not at all. But in a considerable number of instances personal or written communications from the physician have shown us that the pathologic diagnosis has been invaluable to him, either in discovering malignancy or ruling it out. This fact naturally leads to the inference that mistakes are made by every one, and must be most frequently made by those who neglect laboratory aid; that the indications as to diagnosis and prognosis afforded by pathologic examination should be more widely employed. The public are beginning to realize the reliance that

skilled men place upon the laboratory and to demand in increasing ratio this kind of service.

An inspection of the tabulated diagnoses shows nothing new or nothing of especial value statistically, except as it may be used with other similar tables, and may be suggestive in recalling the types of malignant growths and their most frequent locations.

The large number of gynecologic specimens proves the advance that has been made in recent years in that particular field. Very early cancer and pre-cancerous conditions have been quite often recognized in this group, giving us hope that a cure has been effected. An attempt will be made later to obtain information in this respect.

It is to be regretted that this table does not include more autopsy material. It suggests a cessation of scientific interest after death, whereas in fact post-mortem pathology may often be a prolific source of education. Public sentiment of course has much to do with this, and again, circumstances are such as to bring us a minimum of autopsy specimens.

### Notes on the Tables.

The classification of specimens has been based on the diagnosis as found in the records. The nomenclature of various men differs and so it is impossible to unify the terms. The diagnoses have been made by Dr. Heneage Gibbes, Dr. P. M. Hickey, Dr. Joseph Sill, and Dr. Oakman.

**Table 1.** Specimens suggestive of malignancy, but not absolutely diagnostic, have been recorded under malignancy as "suspicious." Chorioepithelioma has been placed under carcinoma, as its derivation and histology seem to indicate.

Under the caption "variety not specified," there is a regrettably large num-



ber of diagnoses. Many records show nothing more than the word "carcinoma," and others, although they include a slight description, do not give a sufficiently absolute clue to venture a classification. These reports were enough to satisfy the clinician, and no further detail was included because they were not intended for scientific or investigative purposes.

**Table 2.** It will be observed in table 2 that nearly 9% of the reports come under the heading "no diagnosis." This is due to the following reasons: (1) That the clinician did not submit proper material; this was because of either too small fragments, or poor preservation, or pieces from an atypical portion of the lesion; (2) that proper data did not accompany the specimen; (3) that the pathologist found no tissue changes sufficiently typical to warrant a diagnosis.

It has been a surprise to us to find that clinicians themselves have been so much at fault in their failure to get satisfactory reports from the laboratorian. There is either a widely prevalent carelessness or lack of knowledge, as to the obtaining of specimens, their preservation, and the necessity for certain clinical data, such as sex, age, location, size, and duration of lesion, presence of metastasis, etc.

The term "other infections" includes syphilis and blastomyces. "Retrogres-

sive" means certain changes, not conveniently included under other heads, such as atrophy, the various degenerations, interstitial change, endarteritis, etc. "Endometritis" has been put in a separate heading to emphasize its importance numerically in our work, and also because of the varying nosology.

Under "unclassified" are included reports too scattering to classify, such as "meat fibre in feces," "blood clot," "no lesion found," "brown atrophy of the heart," "emphysema," "connective tissue," "fibrous tissue," etc.

#### Conclusion.

In considering this compilation it must be remembered that in a clinical laboratory of this kind the reports by no means coincide with the relative frequency of lesions as they actually occur; the specimens represent a larger proportion of serious lesions than the ordinary routine examinations in a hospital laboratory. Moreover, the reports are less uniform, owing to changing personelle, and to the heterogeneity of the patrons.

The main object in this work is to suggest again the value of pathologic examination, especially in questions of malignancy, to encourage greater co-operation and intimacy between clinician and pathologist, and to emphasize the necessity of observing certain details in securing and selecting material for examination.

**Placenta Previa—Treatment in Private Practice.**—Fueth recommends immediate delivery after the first hemorrhage, as there is great danger of secondary hemorrhage or septic infection with other methods of treatment, unless the patient can be watched continuously until delivery.

The liability to placenta previa bears no relation to the age of the mother nor to the number of previous conceptions. The first hemorrhage usually occurs some time before labor, and it is apt to recur if left to nature. Of the cases

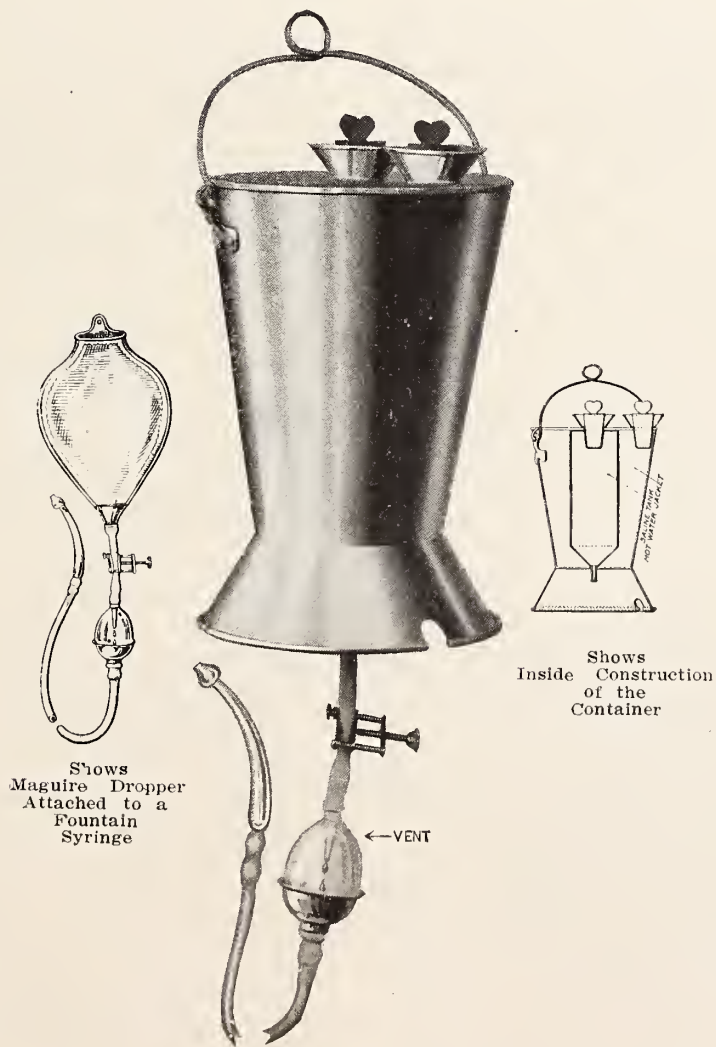
without immediate medical aid, one-third, die. Of 726 cases only 23 had no hemorrhage before labor pains occurred. Treatment with tampons gives great danger of infection in private work, and also of repetition of the bleeding when no physician is at hand. It is therefore best to induce labor, preferably by introduction and inflation of a metreurynter, as soon as the diagnosis can be made. In hospital practice, where physicians are always at hand, it is perhaps safe to wait if the bleeding is not profuse or can be checked without difficulty.—Zent. f. Gyn.

# SALINE CONTAINER AND DROPPER.

F. J. W. MAGUIRE, M.D.,  
Detroit.

The apparatus was designed to fill the need of some handy means for administering solutions by rectum. The illus-

tration shows the details, which have been found in actual practice to be well adapted for the purpose intended.



## The Journal of the Michigan State Medical Society

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to B. R. Schenck, M. D., Editor, 502 Washington Arcade, Detroit, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions or communications.

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DECEMBER

### Editorial

The doctor who needs the help and sympathy of his fellows requires a medical society; and the independent worker, whose originality and success make him independent, owes it to his fellows to affiliate himself with them; and each will find that there is something for him to give and something for him to receive.—Warbasse.



Lodge practice is to be absolutely forbidden the members of the Oakland County Medical Society after the first of the year. At their annual meeting, an amendment to the by-laws of the society was passed which compels any member engaging in this practice to forfeit his membership. This, we believe, is right, although it is quite the most drastic move yet made by any county society in the state.

The evil is such a far-reaching one that any measures to suppress it are justifiable. Before such action is taken every means should be exhausted to get members to give up the work. If these fail—and we understand that they have failed in Oakland—then expulsion for the county, state and national society is none too severe a punishment for the man who persists in a practice which is injuring not only his profession, but the public as well.



The pharmacist and the physician are arriving at a better understanding with

each other year by year. Perfected organization in each vocation, the formulation of more or less uniform ideals and principles, and the necessity of facing common enemies—these are some of the factors that help to develop a bond of esteem and sympathy. Many questions affecting both the druggist and the doctor are still to be settled; many of those already settled in theory have yet to be established in actual practice; for it is one thing to agree upon a set of resolutions, and quite another thing to induce the rank and file to abide by them.

Mr. Leonard A. Seltzer, a well-known pharmacist of Detroit, recently propounded the question, "What shall a pharmacist do when asked by a physician for information concerning a prescription written by another?" He took pains to obtain from physicians written opinions upon points pertaining to this question, and analyzed them, making them the basis of a pertinent article.\* The answers almost unanimously declare that the pharmacist should not read a prescription to any one but the writer of it. This is probably the correct view and embodies the principles upon which Mr. Seltzer has acted in the past.

But an interesting corollary to this conclusion would be an inquiry as to how many other pharmacists here and elsewhere, have acted in this same way or have resolved to act since the knowledge thus gained? It is probable that the matter comes up for decision rather often with every druggist. What is the general custom? Another interesting inquiry would be "How many physicians are in the habit of asking druggists to repeat the recipes of other physicians?" And when they ask, is it because of thoughtlessness, or because they prefer not to ask the man who wrote it?

The pharmacist is in possession of

\*Read before the American Pharmaceutical Association at Los Angeles, August, 1909.



many secrets, regarding both individuals and the profession as a whole, and their divulgence would make interesting reading.



**The Function of the State Board of Registration in Medicine.**—Judging from the letters which we receive from time to time, it would seem that the profession at large does not fully understand the function or the duties of the State Board of Registration in Medicine and Surgery. It frequently happens that we are asked by one of our members to call to the attention of the Secretary of the Board the fact that some charlatan has come into a town and is practicing medicine without a license. Such letters are often accompanied by the request that the State Board proceed at once to take action against the intruder and see to it that he is prohibited from plying his nefarious trade.

As a matter of fact this is in no wise the duty of the State Board. The medical act itself plainly states: "It shall be the duty of the prosecuting attorney of the counties of this state to prosecute the violators of the provisions of this act." This clause is in harmony with the provisions for prosecution under all state acts and is provided for in the State Constitution. The law stipulates that a practitioner shall register his certificate of license with the county clerk in the county in which he has his residence and practice. This is made mandatory in order that there may always be the necessary information as to who is legally qualified to practice, in the hands of the local prosecuting attorney.

In the matter of an illegal practitioner it is a simple matter to obtain from the county clerk his exact legal status. It is also a simple matter to write the Secretary of the Board and ascertain if a suspect has a license to practice in the state. He may have failed to register

his license with the county clerk. While, under such circumstances, he would be technically guilty of illegal practicing, such neglect alone would hardly justify a prosecution.

If, however, one suspected of illegally practicing is found not to have a license issued by the Board, then it is the privilege and the duty of any citizen to lay the facts of the case before the prosecuting attorney of the county. It then becomes the duty of that officer to prepare the indictment against the alleged offender.

The State Board of Registration is charged with the duty of maintaining a certain standard of qualification to practice, to hold examinations for such candidates as may declare themselves, and to issue certificates to those who meet the stated requirements. These duties the Michigan Board, as a body and through its diligent and capable Secretary, has carefully and successfully carried out. The Board has been a leader, both in establishing standards and in developing methods of administration. The Secretary is an authority on the many details of reciprocity and has been instrumental in extending it until thirty-five states are now reciprocating with one another. During the present Secretary's incumbency Michigan has risen from the lowest standard state to the highest. Our Board is the only one in the Union whose credentials are recognized by Great Britain and other foreign countries. In short, it has given the medical licentiates of Michigan a distinct and valuable asset far above par.

It is, then, in no way the function of the Board or of its Secretary to act either as detective, or as informer, or as prosecutor. To ferret out the evidence and lay it before the proper officer is the duty of any citizen, and especially of any medical citizen; to bring an offender to trial is the duty of the prosecuting attorney, only, however, in case

the alleged acts of illegal practice are brought to his attention. The matter is one to which the county society, either through its Committee on Legislation and Public Policy, or through its Board of Directors, should give attention.



**The new tuberculosis law**, passed by our last Legislature, has been in effect since September first and blanks for reporting cases have been sent to all physicians by the State Board of Health.

The credit for this bill is to be given to the State Anti-tuberculosis Society and its Secretary, Dr. A. S. Warthin, of Ann Arbor. It behooves every physician to be conversant with the provisions of the act and to be conscientious in reporting his cases. The following epitome of the law covers all the essential features:

1. Tuberculosis is declared to be an infectious and communicable disease. Blanks giving name, nativity, age, sex, color, occupation, place employed, and address, must be filled in by the physician and filed with the Health office within 24 hours. In hospital cases the chief officer of the institution must file the certificate.

2. All cases in which any discharge shall contain the tubercle bacillus are defined as "open cases," and premises must be disinfected when patient leaves. All other cases ("closed") are to be reported for statistical purposes. For each report sent in, the physician will receive a fee of fifty cents.

3. Health officers must provide, free of charge, microscopical examinations of all discharges submitted to them.

4. Health officers must keep all records in a register provided by the State Board of Health. A copy must be sent to the State Board quarterly. The facts herein contained are not to be disclosed except to the proper authorities.

5. When an apartment or dwelling is vacated, either by the removal or the death of any person with open tuberculosis, the physician, or, if there be no physician, the owner or agent,

must notify the health officer of the vacancy within 24 hours. Such premises shall not again be occupied until "duly disinfected, cleansed or renovated by the local board of health, in accordance with the methods endorsed and recommended by the State Board of Health." The local health officer has complete authority to insist on these requirements being carried out to the letter.

6. In case the owner fail to renovate, etc., the health officer may placard the premises.

7. If a person with open tuberculosis be deemed careless of sputum or other discharges, complaint may be lodged with the health officer and the latter must investigate and serve notice on the offender. If instructions are not heeded, the offender shall be deemed guilty of a misdemeanor and on conviction shall be fined not less than one dollar nor more than ten dollars.

8. Physicians must give proper instructions to insure the safety of those associating with a tuberculosis patient. Circulars of information are to be provided by the health officer for this purpose.

9. Failure to make reports or falsification of reports are punishable by a fine of not more than one hundred dollars.

10. Upon the recovery of any person having tuberculosis, it shall be the duty of the attending physician to make a report of this fact to the local health officer, who shall record the same in the records of his office, and shall relieve said person from further liability to any requirements imposed by this act.

11. Any person violating any of the provisions of this act shall be deemed guilty of a misdemeanor and upon conviction therefor shall be punished, except as herein otherwise provided, by a fine of not less than five dollars nor more than fifty dollars.



**Recent committee appointments**, made by President Carstens, include: On the committee to petition the Legislature to restrict the use of the term "certified milk," Dr. Collins H. Johnston, Grand Rapids, chairman, Thomas B. Cooley, Detroit, Blanche N. Epler, Kalamazoo, C. G. Parnall, Jackson, and M. L. Holm, Lansing. On the Committee on Ar-



rangements, Drs. Virgil Tupper, J. W. Hauxhurst, Morton Gallagher, R. C. Perkins, F. E. Ruggles and A. W. Her-  
rick, all of Bay City. Dr. G. Carl Huber,  
of Ann Arbor, was reappointed on the  
Committee on Medical Education, and  
Dr. Wilfrid Haughey, of Battle Creek,  
was added to the Committee to Encour-  
age the Systematic Examination of the  
Eyes and Ears of School Children  
throughout the State.



The January meeting of the Council  
will be held at the Hotel Cadillac,  
Detroit, on Wednesday and Thursday,  
January 12th and 13th. The meeting  
will convene at 1 p. m. on the 12th, and  
adjourn in time for the State Secretaries'  
meeting on the 13th. A special order of  
business will be the nomination of can-  
didates for the position of Secretary of  
the State Society and Editor of the  
Journal. The Chairman of the Council  
announces that these nominations are to  
be made by members of the society not  
on the Council, at 4 p. m. on Wednes-  
day, January 12th.



The State Secretaries' Society will  
meet at 2:30 p. m. on Thursday, January  
13th, at the Hotel Cadillac. An interest-  
ing and helpful program has been pre-  
pared and it is expected that the Secre-  
tary of the American Medical Associa-  
tion will be in attendance. A dinner will  
be served at 6:30 p. m. Each county  
society should send its secretary to this  
meeting. Other officers of county socie-  
ties are also invited.

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## Book Notices

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**Daniel Drake and His Followers.** Historical  
and Biographical Sketches. By Otto Juettner,  
A.M., M.D., author of "Modern Physiotherapy,"

Fellow of the American Academy of Medicine,  
the American Association for the Advancement  
of Science, etc. With numerous illustrations, in-  
cluding a beautiful frontispiece of Daniel Drake.  
Pp. 496. Price, \$5.00. Harvey Publishing Co.,  
Cincinnati, 1909.

The service which the talented author of this  
book has done for the profession of Cincinnati  
and the middle west can hardly be overestimated,  
for the importance of preserving the facts in  
connection with early medical history is now be-  
ing recognized. Each year which passes without  
local history being written increases the diffi-  
culty of getting together the facts. It is prob-  
able that the early medical history of Detroit  
and Michigan is less rich in important events  
and prominent men than that of Cincinnati and  
Ohio, yet we cannot but wish that someone  
would do for us, what Juettner has done for  
our neighbors.

Daniel Drake was one of the picturesque men  
of early Cincinnati and of the west, and his  
biography is but the history of medical practice  
and medical education of his time. Born of  
poor parents in 1875, the year which gave us  
Beaumont and Dudley and Mott, Drake studied  
under a preceptor in Cincinnati, where, Drake  
narrates, his first duties were "to read Imney's  
Dispensatory and grind quicksilver into unguen-  
tum mercuriale; the latter of which, from pre-  
vious experience on a Kentucky handmill, I  
found much the easier of the two." After fitting  
himself, as was the custom of the day, for prac-  
tice, he was presented with the first diploma  
ever issued west of the Alleghenies. In 1805,  
Drake went to Philadelphia, remaining for a  
session of lectures, and returning to take up  
practice in Cincinnati. Then began a life filled  
with activity and not a little controversy.

Among the interests to which Drake devoted  
himself in his earlier days were the Lancaster  
Academy, an Episcopal Church and a Library  
Society. "It is remarkable how much he ac-  
complished at this time. He did it by ceaseless  
toil and careful systematization of labor. \* \* \* \*  
It was the careful division of his time that en-  
abled Drake to do two men's work, and yet find  
time to meet unexpected requirements." He  
also owned a drug store which he conducted  
with the assistance of his brother, Benjamin.

In 1816, Drake returned to Philadelphia and  
received the coveted diploma which had long  
been a dream.

In 1817, Benjamin W. Dudley, who was the  
founder of the Medical Department of the  
Transylvania University, invited Drake to be-



come Professor of *Materia Medica*. The offer was accepted and Drake removed to Lexington, then known as the "Athens of the West." Its medical school ranked with the six leading schools of the country. However, Drake did not get along well with his fellow professors and the next year returned to Cincinnati where he associated himself in medical teaching with Slack and Rogers, the latter a former partner of Ephraim McDowell. Out of this grew the Medical College of Ohio in which Drake was the moving spirit. When but 33 years of age, Drake had the legislature pass an act incorporating the school. Then began what has been called the "Thirty Years War," the details of which our space prohibits. There were many rows and Drake was expelled in 1822, when he returned to Transylvania, where he remained three years and built up a consultation practice of large proportions. Just why he returned to Cincinnati is not clear. After three years of busy practice in the latter city, Drake accepted an invitation to lecture at Jefferson, Philadelphia, probably with the motive of casting about for new men for his projected rival to the Medical College of Ohio, from which he had been expelled. With several recruits he returned to Cincinnati in 1831. The project failed. In 1835, however, in association with Samuel D. Gross, Willard Parker and J. B. Rogers, he founded the Medical Department of Cincinnati College. Despite a brilliant faculty, this college was dissolved four years later and Drake went to the Louisville Medical Institute where he remained ten years. He was called back to the Medical College of Ohio. His re-entry was in the form of a triumph. However, he yearned for peace and quiet and resigned at the end of the session and died the same year, November 6, 1852.

As an author, Juettner, thus describes Drake's ability: "The delightful diction of an Austin Flint, the clear and logical analysis of a Roberts Bartholow, the engaging, light, graceful and often satirical style of the *feuilleton* so masterfully handled by a William Osler, and the minuteness and painstaking accuracy of detail so characteristic of a George M. Gould, they all enter into Daniel Drake's splendid mastery of the pen." In 1827, Drake was one of the editors of the *Western Medical and Physical Journal*, later becoming sole editor. Among his important contributions at this period were "The *Modus Operandi*" and "Effects of Medicines," and a series

of seven essays on "Medical Education and the Medical Profession in the United States." That Drake was decades in advance of his time is shown by his advocacy of a graded course of four years, of a classical education before beginning the study of medicine, and of bedside teaching.

Drake's most famous writings are "Picture of Cincinnati," which Juettner thinks should be reprinted, and his "The Principal Diseases of the Internal Valley of North America," teeming with original observations.

Such is a very brief outline of the life of this very interesting man. His biographer has done well.

The remainder of the volume is devoted to sketches of the lives of Cincinnati medical men.

The book has more than a local interest and should be possessed by everyone interested in American medical history.

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**Hemorrhage and Transfusion.** An Experimental and Clinical Research. By George W. Crile, A.M., M.D., Professor of Clinical Surgery, Western Reserve Medical College. Pp. 560. Illustrated. Cloth. D. Appleton and Company, New York and London, 1909.

This is the type of book which will enrich any library. It is in no sense a text-book; a monograph, rather, detailing the experimental and clinical work done during the past eleven years along the lines which have made the author famous.

It is divided into two parts, the first on Hemorrhage and the second on Transfusion.

The first 83 pages give in detail the results of experiments on dogs to determine the effects of blood letting in various amounts, together with the results of saline infusion and the administration of strychnine, digitalis, adrenalin and oxygen. The remainder of the first part is devoted to a clinical consideration of hemorrhage, including its symptoms, differential diagnosis and treatment. A particularly valuable chapter is that on "Hemorrhage in Operations."

The second part consists of a treatise on transfusion. A brief history of the subject is followed by "Experimental Studies," giving the results in dogs, of transfusion for hemorrhage, illuminating gas poisoning, and after double nephrectomy, as well as the effects upon metabolism. The clinical studies in this connection are most valuable.

This book is one of the most important addi-

tions to medical literature of the year, and should be read by everyone wishing the latest information in this important field.

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**Organic and Functional Nervous Diseases.** A Text-Book of Neurology. By M. Allen Starr, M.D., Ph.D., LL.D., Sc.D., Professor of Neurology, College of Physicians and Surgeons, New York; ex-President of the New York Neurological Society. Third edition, thoroughly revised. Octavo, 904 pages, with 200 engravings and 29 plates in colors or monochrome. Cloth, \$6.00, net. Lea & Febiger, Philadelphia and New York, 1909.

Starr's book on neurology has undergone a natural evolution. In the first edition only the organic diseases of the nervous system were discussed; in the second the functional diseases were added; in the present edition, just off the press, besides a complete revision, the section on functional diseases has been amplified.

A careful perusal of the text brings out the following as features: Special attention to etiology, differential diagnosis and treatment, with a subordination of theory; the description of personal observation rather than quotation from the literature; careful systematization; lucidity of style; wealth of illustration.

There are four parts. Part I deals with the structure of the Nervous System and the Diagnosis of Nervous Diseases. Part II covers Organic Nervous Diseases. Part III discusses Functional Nervous Diseases, and Part IV Diseases of the Sympathetic System.

The trend of the entire work is distinctly practical, embodying as it does the knowledge gained by twenty-seven years devoted to this specialty. It covers all aspects, both medical and surgical, and the possessor of the work may feel assured that he has at hand the latest and most authoritative information in shape for application.

The make-up and general appearance of the volume leave nothing to be desired.

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**A Treatise on the Principles and Practice of Medicine.** By Arthur R. Edwards, M.D., Professor of the Principles and Practice of Medicine and Clinical Medicine in the Northwestern University Medical School, Chicago. New (second) edition, thoroughly revised. Octavo, 1246 pages, with 100 engravings and 21 full-page plates in colors and monochrome. Cloth, \$5.50, net. Lea & Febiger, Philadelphia and New York, 1909.

Few books reach the second edition as early as has Edwards' Practice, and the author should feel complimented on the unanimous approval which was accorded its first appearance. The author is an experienced physician, a notable

teacher and an untiring worker. These qualities are reflected in his book.

He says in his preface that the work contains everything necessary and everything leading up to the final object of medicine, namely successful treatment.

Thorough systematization is employed for brevity and ease of consultation, and moreover for the even more important advantage thereby secured that facts arranged in their natural order lead into each other and impress the underlying reasons on the reader's mind.

The work has been practically rewritten to secure increased clearness and conciseness, and the result is seen in the extraordinary fact that although the new edition contains a vastly greater mass of information it is some seventy pages smaller. All the real advances throughout this immense domain have been incorporated. Perhaps the most interesting new feature will be found in the fact that particular attention has been given to the therapeutic details in accordance with the recent awakening of the profession to the importance of logical treatment. Numerous new preparations and modified dosages, particularly for children, are explicitly specified. In a word, all classes of readers, students and practitioners alike, will find this very broad and skilful work admirably suited to their requirements.

The diction is excellent and the style flowing without being verbose. It is a delightful book to read, and is to be unreservedly recommended.

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**Primer of Sanitation.** Being a Simple Work on Disease Germs and How to Fight Them. By John W. Ritchie, Professor of Biology, College of William and Henry. Pp. 200; cloth. World Book Company, Yonkers-on-Hudson, 1909.

The importance of preventive medicine is being more and more recognized and it is the universal opinion that the most effective method of educating the people is through the school children. This is the first book which has been written with this end in view. It is by the author of the most excellent school physiology, a review of which appeared in these columns last month.

While still in manuscript form, the text was submitted to health officers and sanitarians in various parts of the country, the result being that problems affecting various localities have been treated in their proper perspective.

The lessons to be learned are all practical and put in such a form that a mere child can under-



stand them. No mention is made of venereal disease, which is probably well, considering that the book is intended for the younger scholars.

There is one error on page 109, where there is a picture of Dr. Walter Reed, "a hero of peace. To find out how yellow fever is contracted, he allowed infected mosquitoes to bite him, and took the disease, of which he died." Reed died, in Washington, of appendicitis. It was Lazear who exposed himself and died of yellow fever.

The book ought to be in every circulating library.

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**A Text-Book of Protozoology.** By Gary N. Calkins, Ph.D., Professor of Protozoology in Columbia University, New York. Octavo, 349 pages, with 125 engravings and 4 colored plates. Cloth, \$3.25, net. Lea & Febiger, Philadelphia and New York, 1909.

The importance of protozoa in the causation of disease is being more keenly recognized during the past few years than has formerly been the case. Possibly one reason for the neglect of this important field has been the difficulty of cultivation of the organisms, for their propagation has been difficult, at least relatively so in comparison with that of the bacteria. Immense gains have lately been made in this field of work.

The role of some of the protozoa, such as the spirocheta, trypanosoma and the malaria plasmodium in the pathology of disease, is well understood. The author of this book, however, has prepared it along very broad lines and it will serve the biologist quite as well as the physician. As a medical text-book it is unique, there being no other along the same line.

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**A Manual of Otology.** By Gorham Bacon, A.M., M.D., Professor of Otology in the College of Physicians and Surgeons, Columbia University, New York. With an Introductory Chapter by Clarence J. Blake, M.D., Professor of Otology in the Harvard Medical School, Boston. New (5th) edition, thoroughly revised. 12mo, 500 pages, 147 engravings and 12 plates. Cloth, \$2.25, net. Lea & Febiger, Philadelphia and New York, 1909.

This little volume has probably been used by more students than any other on the subject. This new edition has undergone revision, with a few additions and some new illustrations. It will remain a standard work for many years, if each revision is as thorough as this.

**An Epitome of Diseases of Women.** By Charles Gardner Child, Jr., M.D. (Yale). Clinical Professor of Gynecology. New York Polyclinic Medical School and Hospital. 12mo, 210 pages, with 101 engravings. Cloth, \$1.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1909. (Lea's Series of Medical Epitomes. Edited by Victor C. Pedersen, M.D., New York.)

It is more difficult to cover the essentials of a large subject, than to expand it in detail. To do either, an author must be master of his department. The small book requires more careful discrimination as to what is of major importance. These obvious principles are well exemplified in Child's Gynecology. It surveys the field in excellent perspective, and the student possessing himself of the knowledge offered in its pages, will have an excellent foundation on which to build his grasp of details in such a way that he will have a good command of both the principles and practice. To the practitioner it will be serviceable for quick reference.

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**The Practical Medicine Series.** Edited by Gustavus P. Head, M.D. Vol. VIII. *Materia Medica; Preventive Medicine; Climatology.* Pp. 348. Cloth, \$1.50. The Year Book Publishers, Chicago, 1909.

The eighth volume for the year of this useful series comprises reviews of recent literature in the departments noted above, which are compiled respectively by George F. Butler, Henry B. Favill and Norman Bridge. All of the volumes in the series are well edited and furnish a most useful review of the progress of medical science.

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**Medicine in Abstract.** By Henry P. Kohberger, Ph.B., M.D., Associate Professor of Medicine, University of Pittsburg. Cloth; pp. 220. Price, \$1.00. Medical Abstract Company, Pittsburg.

This is a vest pocket epitome of medicine, the subject matter being arranged alphabetically. We seriously question the value of "aids" of this kind; there is, however, a demand for them and this is as good as any we have seen.

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**The Physician's Visiting List for 1910.** Flexible leather; price, \$1.00. Philadelphia, P. Blakiston's Son & Co., 1909.

This, perhaps the most popular of the several visiting lists, is now in the fifty-ninth year. It is well known to most practitioners. Its arrangement is unexcelled and the paper and binding are both artistic and practical. Many useful tables are included in small space.



## Department of Western Michigan

Comprising the Fifth and Eleventh Councilor Districts.

F. C. WARSHUIS, GRAND RAPIDS,

CORRESPONDENT.

Assisted by

F. G. Sheffield, Hastings.  
C. S. Cope, Ionia.  
G. H. Thomas, Holland.  
Donald Mac Intyre, Big Rapids.

H. L. Bower, Greenville.  
V. A. Clapman, Muskegon.  
G. G. Burns, Fremont.  
D. S. Fleischauer, Reed City.

### Kent.

The announcement of an addition of twenty-six new members during the past month is sufficient to convey the knowledge that Kent County is again busily engaged and interested in society work. Besides these the secretary has received the applications of six others which will be acted upon at the next meeting. Those who have not been members are commencing to realize that they are personal losers as long as they remain unaffiliated.

On November 10th, Dr. M. P. Ravenel of Madison, Wisconsin, was the invited essayist of the Society and read a paper entitled, "The Relation of Bovine Tuberculosis to Public Health." This meeting was attended by 92 members. After the meeting the members adjourned to the Pantlind Hotel where a couple of pleasant social hours were spent with the necessary refreshments and stories. Before the meeting Dr. Ravenel was entertained at a private dinner at the Pantlind to which the officers and Board of Directors of the Society were invited.

The Scientific Program for the meeting of November 23rd was a symposium on "Puerperal Eclampsia" conducted by the following members: Etiology and Pathology, Dr. T. C. Irwin. Symptomatology and Prognosis, Dr. J. Kremer. Treatment, Dr. G. L. McBride.

This closed the scientific meetings for this society year. The annual meeting for the election of officers will be held on December 8th.

The Bulletin will issue a twenty-eight page edition as an annual number.

At an expense of some \$1,500, Butterworth Hospital has just completed an addition to its Woman's Surgical Ward. This will create facilities for caring for ten additional patients. With still three months to go, this hospital has already taken care of 108 patients more than it did during its last official year. The patronage of the Free Dispensary is increasing daily and

is more than meeting the expectations of the board.

The much-needed overhauling of the operating room of the U. B. A. Hospital has been completed at an expense of \$1,000.

In order that she may obtain some new ideas and recent methods of surgical technic, the Board of the U. B. A. has sent their Surgical Supervisor to visit some of the various hospitals of the country.

Dr. J. O. Edie returned November 1st from a ten days' visit in Denver.

Dr. F. E. Berge has moved his office from 73 Monroe street to the Gilbert Building.

Dr. J. J. Mersen of Holland is attending the clinic at Rochester, Minn.

Dr. Malcolm E. Smith departed for Tacoma, November 13th. The doctor intends to locate there permanently.

Dr. Burton R. Corbus submitted to an appendectomy, six hours after the onset of his second acute attack, on November 22nd.

Dr. Fred W. Neal is confined to his bed with no hope for recovery on account of a rapidly growing sarcoma of the hip joint.

Dr. Charles Quick is convalescing from a serious illness which for a time threatened to terminate fatally.

Dr. J. E. Ferguson has taken offices in the Ashton Building, Grand Rapids, and will devote himself to diseases of the eye, ear, nose and throat.

### Muskegon-Oceana.

A News-censor Committee has been appointed by the president. It consists of Drs. V. A. Chapman, J. T. Cramer, F. B. Marshall, for Muskegon County. For Oceana County, the members are: Drs. W. L. Griffin of Shelby and J. H. Nicholson of Hart.

### Osceola-Lake.

A well attended meeting of the society was held at Reed City, October 6th, under the presidency of Dr. U. D. Seidel. The following were present: Drs. H. L. Foster, U. D. Seidel, T. F. Bray, H. S. Nolte, D. S. Fleischauer, C. D. Woodruff and J. W. Newcomb, of Reed City; W. T. Dodge, J. L. Burkhart, Donald MacIntyre and A. A. Spoor, of Big Rapids; A. Holm and J. N. Thomas, of Le Roy; G. T. Field of Chase and W. H. Williams of Evart.

Dr. H. L. Foster gave a report of the meeting of the State Society at Kalamazoo, followed by a paper on Chronic Suppurative Otitis Media by Dr. Donald MacIntyre. Dr. T. P. Bray's subject was Diet in Typhoid Fever. The scientific part of the program was concluded by Dr. H. A. Spoor, who contributed a paper on Bacterial Vaccines, their Uses and Value.

Councilor Dodge led in a discussion on Medical Defense and the society voted unanimously to avail itself of the privileges of the league. Dr. H. L. Foster of Reed City was elected the local member of the Medico-Legal Committee.

After the meeting the members adjourned to Hotel King for a lunch, where all enjoyed themselves splendidly into the "wee sma' hours" of the night.

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### Ottawa.

The annual banquet was held at Hotel Holland Novemebr 9th, and was well attended.

Dr. C. P. Brown of Spring Lake acted as toastmaster and the genial doctor was at his best, but his enthusiasm was somewhat dampened by the premature report of his death. It was not the fact of death so much as it was the manner, time and place of events leading to the report which annoyed the doctor.

Dr. Brown is the most modest man in Ottawa County. There are others here who might have stood it better.

Drs. Wm. De Kleine, Grand Haven; E. E. Brunson, Ganges; Richard R. Smith, Grand Rapids; C. Van Dulenburg, Riverside, Cal., and F. D. Smith, Coopersville, responded to toasts.

The program from December 14th to April 12th, inclusive, has been published. The outline is as follows:

December 14th, Council Rooms, Holland.—Surgical meeting. The program includes; "Sur-

gery of the Brain," R. J. Hutchinson, Grand Rapids; "Repair of the Perineum," J. J. Mersen, Holland; Case Report, T. G. Huizenga, Zeeland.

January 11th, Grand Haven, Medico-Legal meeting. Two addresses will be given, one by C. C. Coburn, Prosecuting Attorney of Ottawa County, on "Criminal Malpractice," and the second by Attorney G. A. Farr, of Grand Haven, on "Civil Malpractice."

February 8th, Council Rooms, Holland. Medical meeting. "Diseases of the Gall Bladder," Dr. G. D. Cook, Holland. "Diagnosis and Treatment of Diabetes," R. J. Walker, Saugatuck.

March 8th, Council Rooms, Holland. Dr. Burton R. Corbus, of Grand Rapids, will read a paper on "Significance of Analysis of Stomach Contents," followed by Dr. N. H. Kassabian, of Coopersville, on "Diagnosis and Treatment of Ulcers of the Stomach."

April 12th, Coopersville, Preventive Medicine. There will be three papers as follows: "The Attitude of the Profession Toward Preventive Medicine," by J. F. Peppler, of Byron Center; "Serum Therapy in the Prevention of Disease," by William De Kleine, of Grand Haven; "What Should Constitute a Quarantine," A. T. Boot, Holland.

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### Newago.

At the regular meeting of the Newago County Medical Society, held in Fremont, October 21st, 1909, the society resolved itself into an Anti-Tuberculosis Society.

The secretary, Dr. G. G. Burns, was elected as the local member of the Medico-Legal Committee.

Dr. N. De Haas is absent in the west; on the return trip he will visit the Mayo clinic, at Rochester.

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## County Society News

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### Chippewa.

At the regular monthly meeting of the Chippewa County Medical Society held at the Park Hotel Sault Ste. Marie, November 2, 1909, the minutes of the previous meeting were read and approved.

After the reports of the clinical cases, two very interesting papers were read, one by Dr. J. J. Lyon on "Typhoid Fever in Algonquin," a suburb of the Soo, the other by Dr. E. H. Webber on "Use of Normal Salt Solution in Toxemias." Both papers were well discussed by all present.

The communication from the Chairman of the Medico-Legal Committee was read and approved, and as Dr. C. J. Ennis is the Councilor from this District, no one was elected from this county as a member of the Medico-Legal Committee.

The following resolutions, drawn up by Drs. Ennis, Townsend and Winslow, endorsing the candidacy of Chase S. Osborne for Governor of Michigan, were passed:

*"Whereas, The Hon. Chas. S. Osborn of this city has announced his candidacy for the Republican nomination for Governor, and*

*Whereas, Mr. Osborn's especial fitness for the duties incumbent upon the State's Chief Executive are undeniable and are well known to every member of this Society, and*

*Whereas, Mr. Osborn's attitude upon questions of public health are such as to command the approval of the medical fraternity and all others interested in this or allied questions, and*

*Whereas, Mr. Osborn is exceptionally well informed on the existing medical legislation and is familiar with the necessities which must be met by further enactments by the legislature; therefore, be it*

*Resolved, That this Association, comprising all of the medical fraternity in this county and known as the Chippewa County Medical Society, do most heartily and enthusiastically endorse the candidacy of Hon. Chase S. Osborn and commend it to the favorable consideration of medical men in every section of the state and urge their support for Mr. Osborn in the approaching primary contest."*

Resolutions were also adopted expressing the regret of the Society over the removal of Dr. J. Rosenthal to Philadelphia and extending to him and his family its sympathy in his recent bereavement.

The Society protested against the resolutions adopted by the Board of Supervisors, at its recent meeting, in fixing the charges of physicians in county cases. A committee, consisting of Drs. F. Townsend, Dickinson, and Bennie was appointed to go before the Board at its January meeting and endeavor to have the resolutions

reconsidered and rescinded.

The meeting, which was well attended, was one of the best meetings held during the year. The December meeting will be the annual meeting of this Society, at which time we shall elect officers for 1910.

JAMES GOSTANIAN, *Sec'y.*

#### Clinton.

The Clinton County Medical Society held its annual meeting November 4th, and the eleven members present proceeded to elect the following officers: President, Dr. Samuel M. Post, St. Johns; Vice-President, Dr. A. O. Hart, Maple Rapids; Secretary-Treasurer, Dr. W. A. Scott, St. Johns; Delegate to State Society, Dr. E. Schemer, Fowler; Alternate, Dr. J. T. Abbott, Ovid; County Member of Medico-Legal Committee, Dr. M. Weller, St. John.

Dr. H. Hoover of Eagle was elected to membership in the society.

Dr. A. O. Hart, the delegate to the Kalamazoo meeting, gave a very good report of the proceedings of the State Society meeting.

Resolutions which appear in this Journal were passed relative to the death of Dr. Henry N. Palmer who had long been a member of our Society. Although he had rarely attended and had, during the past few years, retired from active practice, he was an able and modern physician.

The day following the burial of Dr. Palmer, the community was shocked to hear of the death of Dr. Samuel M. Post, our newly elected president. He returned to his home late in the evening and expired almost immediately after entering the house. Dr. Post was the oldest in practice in the county and an able man. In him our society loses a president and friend.

W. A. SCOTT, *Sec'y.*

#### Ingham.

The annual meeting of the Ingham County Medical Society was held November 11, 1909.

The society was entertained by Dr. and Mrs. O. H. Breugel, Dr. and Mrs. C. V. Russel, and Dr. Clara Davis and her mother at Dr. Davis' home in Lansing.

We decided to avail ourselves of the benefits of the Medico-Legal Fund. Dr. H. A. Haze was appointed local committeeman.



Two new members were elected.

At this meeting the following officers were elected: President, C. H. Brucker, Lansing; Vice-President, O. H. Freeland, Mason; Secretary-Treasurer (re-elected), Samuel Osborn, Lansing.

It was decided that, this year, as was the custom last year, every second bi-monthly meeting be held outside of Lansing.

A motion was carried that it be made the practice, in Lansing, of closing the physicians' offices on Tuesday evenings of each week.

An elaborate dinner was served at 6:30. The attendance was good and a most enjoyable evening was the result.

SAMUEL OSBORN, *Sec'y.*

### Hillsdale.

At the regular quarterly meeting of the Hillsdale County Medical Society, held at the Court House, Hillsdale, Friday, October 29, 1909, the following papers were presented:

The Relation of the Physician to his Patient and the Laity, by Dr. Ira J. Stoner of Osseo.

Bladder Symptoms, How Caused. Dr. Frederick Robbins, Detroit.

President's Annual Address: Organization, Dr. S. B. Frankhauser, Hillsdale.

The Society accepted the Medical Defense Plan but through an oversight did not elect a county member to the Medico-Legal Committee.

The officers for next year are: President, Dr. Ira J. Stoner, of Osseo; Vice-president, Dr. H. H. Frazier, of Moscow; Secretary, Dr. B. F. Green, of Hillsdale; Treasurer, Dr. W. F. Waller, of Frontier.

B. F. GREEN, *Sec'y.*

### Houghton.

The October meeting was held at Calumet. Dr. N. S. MacDonald, of Hancock, delegate to the State Society, gave a report of the transactions of the House of Delegates, referring particularly to the Medical Defense League, and several of the members who attended the State meeting presented ideas and suggestions gleaned from the Scientific Sections.

Dr. C. H. Rodi, of Calumet, reported a case of Tumor of the Upper Jaw; preceding his report with a description of the "Clinical Character of Tumors in General."

He said that tumors may be clinically divided into two classes:

1st. Tumors that are entirely due to local lesions that are self explainable, as for example, sebaceous tumors, ranula, hernia, hydrocele, etc., all of necessity benign.

2nd. Tumors depending for their explanation upon something outside of the local condition, as the nodes of syphilis, tubercular, enlarged glands, the multitudinous expressions of cancer. The tumors of this class are to be viewed not in themselves but in dyscrasia of which they are simple phenomena. Any tumor wherever situated being without a history which explains its presence is to be called and treated as cancer.

To the clinician any tumor with no local or common vice explanatory of its presence is placed with cancer, so far as its treatment is concerned. It is to be cut away or let alone. This is the sum of its treatment.

A histological and clinical description of the various epulides, or growths upon the gums was also given, and a case with a history as follows reported:

O. M., female, age 22. Suffered from growth of the upper jaw for ten months. Pain and swelling were at first thought to be due to toothache, and tooth was extracted without relief.

The tumor spread over the right superior maxilla, making the cheek very prominent. It was very hard and did not crepitate on pressure. At operation the gum was turned back, and a heavy crust cut into filled with a white potato colored hard cartilaginous material, extending into the nasal cavity, and into the orbit posteriorly. Dr. Warthin reported the growth an edematous fibroma, or fibroma molle. The patient has made a good recovery.

Dr. A. R. Tucker, of Mohawk, read a paper "On the Action of a Few Drugs on the Heart," confining his attention to the action of alcohol, aconite and digitalis.

The indications for these drugs were presented very thoroughly and brought out a very active discussion.

In the discussion, Dr. Joy said the preparations of digitalis are not always reliable, and the indications for its use not clear. It should not be used in aortic disease as in this condition it predisposes to acute dilatation.

Dr. Lawbaugh does not fear the depressing effect of aconite if given as follows:

R Fl. Ex. Aconite, m. v.  
Water, oz. vi.

S. dr. i. Every 10 minutes for an hour; then hourly.

He never gives digitalis in pneumonia, preferring Hoffman's Anodyne in 20 minim doses.

Dr. MacDonald said he did not give digitalis in large enough doses in his early practice, giving but 10 to 15 minims of the tincture. He now gives 20 to 30 minims, sometimes hourly until result desired is produced, and the pulse-rate reduced from 110 or 120 to 50 or 60. He uses it in failing compensation only.

Dr. West uses digitalin in 1/10 to 1/15 gr. doses.

Dr. Rodi uses aconite in the early stages of pneumonia. In using digitalis he gradually increases the doses until he gets the result desired.

Dr. H. H. Ruonavaara exhibited specimens of tapeworm accompanied by a microscopic demonstration.

JOHN MACRAE, *Sec'y.*

### Schoolcraft.

The regular annual meeting of the Schoolcraft County Medical Society was held at Manistique, October 27, 1909. The following officers were elected for the ensuing year: President, Dr. D. W. Roos, Manistique; Vice-President, Dr. S. S. Hackwell, Blaney; Secretary-Treasurer, Dr. G. M. Livingston, Manistique; Directors, Dr. Frank Rainie, Dr. Andrew Nelson, Dr. J. W. Saunders.

Our society unanimously favors the plan of Medical Defense as adopted by the State Medical Society at the Kalamazoo meeting. Dr. G. M. Livingston was elected county member of the medico-legal committee.

Dr. J. W. Saunders, formerly of Gould City, was elected a member of our society by transfer of membership from the Chippewa-Mackinac-Luce Society.

G. M. LIVINGSTON, *Sec'y.*

### News

The new home of the College of Physicians of Philadelphia was dedicated with fitting cere-

monies, November 10 and 11. This society, organized January 2, 1787, is the oldest medical organization (not a state society) in the United States. The society is a scientific and not a teaching body. Until recently the number of its fellows has been very small. It has never aimed to include the rank and file of the profession, but has had a selected fellowship, which even now numbers only 439 fellows, 40 associate fellows, of whom 11 are from Great Britain, and four corresponding members.

According to Ernest P. Bicknell, director of the American Red Cross (The Survey, Oct. 16, 1909), the sale of stamps last year netted \$135,000 for the campaign against tuberculosis. This season the Red Cross will provide a supply sufficient to meet all needs. A new design, the result of a competition among about 1,200 persons, has been adopted. The stamp, one inch square, will be in red and dark green with lettering in white, and will be sold for one cent. The stamps are to be sold only by recognized and reliable agents and the proceeds must be devoted to anti-tuberculosis work. The stamps, posters, and printed matter intended to assist in the sale of stamps will be supplied to agents free, the agency to return to the Red Cross the unused stamps and one-third of the face value of the stamps sold. (The Red Cross may be addressed at Washington, D. C.) The privilege of selling the stamps in the corridors of the post offices has been granted this year as last.

The American Association for the Study and Prevention of Infant Mortality was organized at New Haven, November 13, as the result of the convention of the American Academy of Medicine for the discussion of that topic. The following officers were elected: President, Dr. J. H. Mason Knox, Jr., Baltimore; vice-presidents, Prof. C. E. A. Winslow, biologist-in-chief of the laboratory of sanitary research, Massachusetts Institute of Technology, Boston, and Homer Folks, secretary of the New York State Charities Aid Association, and secretary, Dr. Henry I. Bowditch, Boston.

Mr. John D. Rockefeller, who has given \$1,000,000 to investigate and combat the hookworm disease, has selected the following commission to have charge of the administration of the fund: Drs. William H. Welch, Baltimore; Simon Flexner, New York City, and Charles Wardell Stiles, U. S. P. H. and M.-H. Service; President, Edwin A. Alderman, of the University of Virginia; Chancellor David F. Houston, of Washington

University, St. Louis; P. P. Claxton, professor of education in the University of Tennessee; J. Y. Joiner, state superintendent of education of North Carolina; Walter H. Page, editor of the *World's Work*; Principal H. B. Frissell, of Hampton (Va.) Institute; Frederick T. Gates, Starr J. Murphy, and John D. Rockefeller, Jr.

In the opening of the medical course of the University of Michigan, a change is made from a four to a six-years course in this department. Heretofore the six-years course has been optional, but from this time on it is made obligatory.

The bequest left to Battle Creek Sanitarium by Charles E. Wood, a former patient, consists of stocks, bonds and real estate, which are expected to realize more than \$500,000. This will be expended, in part at least, in the founding of a memorial sanitarium at Atlantic City, N. J.

Governor Warner has announced the following board of registration of nurses: Miss Elizabeth G. Flaws, of Grand Rapids, and Miss Alfreda Maud Galbraith, of Cheboygan, for the term ending July 31, 1912; Dr. Arthur W. Scidmore, of Three Rivers, and Miss Elizabeth Tracey, of Detroit, for the term ending July 31, 1915.

Dr. Joseph V. Grahek, Calumet, who was recently elected supreme physician of the National Croatian societies, will make his headquarters in Pittsburg. Dr. Herman H. Ruonavaara, Calumet, succeeds Dr. Grahek as supreme physician of the United Croation-Slevonian societies of the upper peninsula.

The Mississippi Valley Medical Association will meet in Detroit in 1910.

Dr. Guy H. McFall, secretary of the Wayne County Medical Society, has removed from the Gladwin building to 503 Washington Arcade, taking offices with Dr. Flemming Carrow.

Dr. Eugene Kendall, Detroit College of Medicine, 1909, has opened offices in his home town, Grand Rapids.

Dr. J. W. Schureman, a recent interne at Harper Hospital, has located in Adrian.

Dr. E. V. Howlett, formerly of the Copper Range Hospital, at Trimountain, has located in Detroit, having taken the office in the Pasadena, Jefferson avenue, recently occupied by the late Dr. Moran.

Dr. Harold Hume, a 1909 graduate of the Detroit College of Medicine, has taken up practice

with his father, Dr. A. M. Hume, of Owosso.

The officers of the new Detroit General Hospital are: President, Otto Kirchner; vice-president, Frederick M. Alger; secretary, John M. Russel. The Security Trust Company will act as treasurer. Besides the three above named gentlemen, the trustees are Henry Ford and E. Leyden Ford. Temporary offices have been opened at 917 Ford building.

A tuberculosis mass meeting was held at the Armory in Detroit, Sunday, November 5th.

Dr. John Lee, who was engaged in collision with an automobile a few weeks ago, has so far recovered as to attend to his professional duties again.

The Harper Hospital polyclinic has been renovated and redecorated, the pharmacy enlarged, and a sun-room built for convalescents.

Dr. George B. Chene, Detroit, has installed an X-ray apparatus in his offices at 706 Gas Office building.

Dr. V. C. Vaughan, of Ann Arbor, delivered the address at the celebration of the union of the Ohio and Miami Medical Colleges. These colleges now form the Medical Department of the University of Cincinnati. The celebration was on December 1st.

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## Marriages

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Charles Wallace Edmunds, M. D., Ann Arbor, to Miss Lillian Virginia Kaminski, of Richmond, Ind., September 15th.

Emil Amberg, M. D., to Miss Cecile Siegel, both of Detroit, November 16th.

George Thomas Britton, M. D., Kalamazoo, to Miss Margaret Monroe, Flint, September 22nd.

Frank B. Allison, M. D., Detroit, to Miss Florence Perkins, Pontiac, September 15th.

George H. Fox, M. D., Ann Arbor, to Miss Gertrude Olcott, Corning, N. Y., October 14th.

Frank Smithies, M. D., Ann Arbor, to Miss Mary Louise Kellam, Topeka, Kansas, September 25th.

William Tyson, M. D., Detroit, to Miss Elizabeth McPherson Weems, of Baltimore, November 27th.



Alden Williams, M. D., and Miss Roller, of Grand Rapids, were married November 24th. Mrs. Williams is a daughter of Dr. L. A. Roller.

Hugo Freund, M. D., Detroit, and Miss Hortense Goldsmith were married in Detroit, November 9th.

## Deaths

John R. Moore, M. D., Chicago Medical College, 1873; a member of the American Medical Association; chief surgeon of the United States Steel Corporation's Lake Superior mines, local surgeon for the Chicago & Northwestern Railroad and a member of the surgical staff of the Ironwood, Mich., Hospital; was accidentally shot and seriously injured at his camp on Clark Lake, near Ironwood, November 7th, and died at the Ironwood Hospital, November 15th, as a result of his wounds, aged 59.

Aaron W. Riker, M. D., Albany (N. Y.) Medical College, 1856; president of the village of Fenton, Mich., for several terms a member of the village council, and for twenty years a member of the school board; for many years district surgeon for the Detroit, Grand Haven & Milwaukee Railway; died at his home in Fenton, October 31, from fatty degeneration of the heart, aged 78.

Henry Martyn Northam, M. D. University of Michigan, Homeopathic College, Ann Arbor, 1893; formerly of New Middletown, Ohio; died at his home in Ann Arbor, October 31st, from cerebral hemorrhage, aged 51.

Abram Duane Salisbury, M. D. University of Michigan, Ann Arbor, 1865; died at his home in Midland, October 16th, from septicemia.

George J. White, M. D. University of Michigan, Ann Arbor, 1880; local surgeon of the Chicago & Grand Trunk Railroad in Jackson, Mich.; died at his home in that city, October 19, from cerebral hemorrhage, aged 54.

R. N. Johnson, M. D., a well known practitioner of Northville, died there September 9th, aged 65 years.

Hiram A. Wright, M. D., of Detroit, a prominent member of the Wayne County Medical Society, died at his home, November 24th, after a

long illness with typhoid fever. Dr. Wright was born in 1863 and graduated from Victoria College, Toronto, in 1886. He was intimately connected with several insurance companies and was for many years an examiner of the Northwestern Life Insurance Company. He also devoted much time to the study of psychiatry. Dr. Wright leaves a widow and one daughter, aged 12 years.

Samuel Moses Post, M. D. University of Michigan, Ann Arbor, 1871; a member of the Michigan State Medical Society; a member of the local pension board; died suddenly at his home in St. Johns, November 6th, from heart disease, aged 61. Dr. Post had lived in Clinton county for 30 years, the last 14 having been spent in St. Johns.

The Clinton County Medical Society adopted the following resolutions:

*Whereas*, It has pleased Almighty God to remove from our midst our much esteemed fellow practitioner, Dr. Samuel M. Post, and,

*Whereas*, In the death of Dr. Post, the Clinton County Medical Society has lost its much respected president, and,

*Whereas*, We each and all feel keenly the loss of one of our profession, whom we trusted and loved, and who was ever kind and courteous to those about him. Therefore, be it

*Resolved*, That we, the members of the Clinton County Medical Society, extend our heartfelt sympathy to the bereaved family and friends; and, be it further

*Resolved*, That a copy of these resolutions be sent to the family of the deceased, and also spread on the minutes of the Society.

M. WEBBER,

W. A. SCOTT,

W. H. GALE,

\* Committee.

Henry Palmer, M. D. University of Michigan, Ann Arbor, 1887; formerly a member of the Michigan State Medical Society; for several terms mayor of St. Johns, and health officer and supervisor of Clinton county; a member of the local pension board; died at his home in St. Johns, November 2d, from diabetes, aged 52.

Resolutions on the death of Dr. Palmer were passed by the Clinton County Medical Society as follows:

*Whereas*, It has pleased Almighty God to remove from our midst our much esteemed colleague and citizen, Dr. Henry Palmer, and,

*Whereas*, In the death of Dr. Palmer, we each

and all feel keenly the loss of one of our profession, whom we had learned to love and respect, and who was ever kind and considerate to all with whom he came in contact. Therefore, be it

*Resolved*, That we, the members of the Clinton County Medical Society, extend our heartfelt sympathy to the bereaved family and friends; be it further

*Resolved*, That a copy of these resolutions be forwarded to the family of the deceased, and also spread on the minutes of the Society.

M. WEBBER,  
W. H. GALE,  
W. A. SCOTT,  
Committee.

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## Correspondence.

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Munich, November 1, 1909.

To the Editor:

The United States of America are liberally represented among those who are in attendance at Kraepelin's clinic. Hitchcock is here, as you know. Hoch of New York, also Amsden of White Plains and Karpas of the Staff of Ward's Island are among the others.

"Aren't we having a bully time?" Hoch exultingly asked, "with the delightful clinic of Kraepelin this morning, Liepmann's lectures on aphasia, Alzheimer's wonderful demonstrations of the histology of the nervous system, an hour at the Pinakothek and this evening a Wagner concert." Isn't this living "on the heights?" It truly is. There is no extravagance in saying that the Müncheners are the most favored people in the world. Oh! the art and the music, the bonhomie (pronounced once by a friend of mine "bon homing") and gemütlichkeit of Munich. It is unique among cities.

We are not given over to the pleasures of the world, however. This I would have you understand right off. We are averaging about six hours a day in the clinic, and it is a strain on the attention of one whose German is so undependable as mine. Apropos of German-English, the discovery of a mostly-English-speaking colleague that they were procuring from the porpoise serum for diagnostic purposes in preparing for the Wasserman reaction was interesting. "Meersch-

wein" would most naturally translate itself as sea hog or porpoise. The serum came from "Meerschweinchen" which is a pig of the Guinea stamp. Turning over in my mind the possibilities of the pursuit of the porpoise in early morning for laboratory purposes, I became hysterical and was compelled to make a ball of my handkerchief to stuff into my mouth.

The Professors are masters in their special lines and full of their subjects. We have Liepmann of Berlin who has written extensively on aphasia and allied disorders, a master of the matter in hand and infinitely painstaking and serious in its presentation. There is Alzheimer, whose work on the histology of the nervous system is so well known. There is Plant who presents sero- and cyto-diagnosis. There is Rudin whose subject is "The Facts and Problems of Degeneracy." There are Isserlin on Psycho-Diagnosis and Psychotherapy and Weiler on Psychiatric-clinical Diagnosis. These we have already heard. Later on come Brodermann on Topographical Histology and Kattwinkle with Neurological Demonstrations. But the head and front, the life and animation, the cornerstone of the klinik is Kraepelin. He is of medium height, stout build, of age about 50, quick, active, earnest and intense. His hair is iron gray and he wears it cropped closely. I have not discovered any facial scars but Alzheimer's head and face are liberally decorated with the cicatrices of students' battles. With patients, Kraepelin is most pleasing. He is kindly, trusting, bland, gentle, quite un-German. One would say who has had much experience of medical men of this country in their relations with patients. It is quite plain that the success that he has attained in psychiatry is attributable in no small measure to an enjoying personality. He is anxious that the members of the class should obtain all the information they can assimilate. "Was wünschen Sie," he asked me most politely, happening to hear a *sotto voce* inquiry directed to an American colleague. He solicits questioning about cases and clinical and experimental appliances, and pays strictest attention to elaborating what he has previously said on presenting a new thought. We find that he can make mistakes like the rest of us poor mortals. The last clinic was mainly devoted to puzzling cases in which in almost every instance a diagnosis which required a revision had been made.

The Psychiatric Clinic accommodates 98 patients and Prof. Kraepelin has *carte blanche* in its development and administration. He made it



a condition of coming from Heidelberg, he told us, that the number of patients should be strictly limited and never exceed a certain figure. He has everything that he needs for the care of patients and for medical teaching and has no care for ways and means. He has a large force of internes and nurses, while a sister identified with some religious order is in charge of every ward. Two keys admit to every part of the building. They are used for doors to rooms, little doors in the walls concealing an electric switch, or a telephone, for the cupboards in which individual shaving mugs, tooth brushes and soap dishes are found, for access to water valves.

The feature, therapeutically speaking, is the provision for prolonged baths and the water temperature regulation in connection therewith. Visitors are given free access to every part of the clinic. Scrupulous neatness prevails everywhere. I can find no criticism except of the uniform, and not very presentable dress of patients. Men are clad in a long garment of night shirt style and "hickory" pattern.

There was absolute quiet in every ward of the men's department on the day of our visit. No restraint was anywhere used. Kraepelin says he has found in twenty-two years no necessity for its employment. He declares moreover that patients are not coerced to receive treatment, such for instance as the prolonged baths.

Admissions are purely voluntary and without legal act any more than obtains in a general hospital anywhere. In case a patient known to be dangerous to the public or himself insists upon discharge, his case is passed upon by the *medical representatives* of the Government whose decision is final. We have not a little to learn in America of the medical jurisprudence of insanity.

With best regards,

Very truly yours,

C. B. BURR.

Munich, November 2, 1909.

To the Editor:

It has occurred to me that you, and possibly some of the readers of the Journal, might be glad to know about this fine post-graduate course in Psychiatry which Dr. Burr and I, from Michigan, together with six other Americans, are greatly enjoying. The 55 others who make up the 33 taking the course are from various European countries, Germany, Russia, Switzerland, Italy, Spain, Portugal, Poland, Sweden, England, Hol-

land, Austria, and Turkey, all contributing. The one woman taking the course is from Russia. A number are asylum men from various countries. My very polite neighbor across the aisle is from an asylum at Milan, Italy's largest asylum, Iliere, and he prefers to talk with me in French. Near him sits an asylum man from Hemech. Just below me is one from Upsala in Sweden. One just behind me is in private practice and is connected with the clinics at Prague, where, he tells me, the psychiatric material is large.

The course is organized under the leadership of Kraepelin, the great master of psychiatry and at the head of Der Psychiatrische Klinik, and crowds a lot of work into three full weeks. We work every day but Sunday and from five to eight hours a day,—three days working until eight p. m.

The course is divided as follows and its details are managed by Alzheimer, who is giving us splendid lectures on histology:

Alzheimer—Histology of the Cortex.

Brodmann (Berlin)—Topographical Histology.

Isserlin—Psycho-diagnosis and psychotherapy.

Kraepelin—Psychiatric Clinical Demonstrations.

Kraepelin—Experimental Psychology.

Kattewinkel—Neurological Demonstrations.

Plant—Sero- and Cyto-diagnosis.

Liepmann (Berlin)—Aphasia, Aprasia, and Agnosia.

Rudin—Facts and Problems of Degeneration.

Rudin—Forensic Psychiatry.

Weiler—Psychiatric and Clinical Diagnostic Methods.

Liepmann is especially full of his subject and has given us many interesting hours.

Kraepelin is always enjoyable, for he is a wonderful man in the readiness and variability of his information. It is useless to speak of all. We are agreed that the course is most interesting and valuable.

Munich, as you know, is a beautiful city. Its works of art and fine public buildings make attractive one's environment and its theatres and concerts afford welcome relaxation after a day's work in the students' seats. And one may, if he choose, listen to Wagner music by a fine orchestra, over a stein of Munich beer, for the price of a mark (25c).

We feel that, as one man put it, with visits to the beautiful galleries, with their treasures of art, between morning and afternoon work, occasionally, and a play or a concert in the evening



after the enjoyable lectures of the day, we are just now living in the high places of life.

Cordially yours,

CHARLES W. HITCHCOCK.

Detroit, November 25, 1909.

To the Editor:

I note a communication in the October number of *The Journal* in which Mr. C. F. Schneider of Grand Rapids attempts to criticize, deny or modify the facts contained in the "Notes on Recent Legislation" authorized by the Committee on Legislation of the State and Wayne County Medical Societies and since endorsed by the State Medical Society, and which notes through a misunderstanding were erroneously credited to me by signature. Mr. Schneider prefaces his criticism by the statement that he is a layman and not connected with either the nursing or medical professions. His knowledge and expertness connected with the subject of State Registration of Nurses is based upon his experience with one nurse and one doctor. This experience leads him to a conscientious belief that he is more properly fitted by education and experience to judge as to what is proper legislation for nurses than the State and County Medical Societies composed of some twenty-five hundred of the qualified and registered physicians of the state under whom nurses serve and who were in opposition to the so-called nurses' bill as manifested through their regular organizations.

Again, Mr. Schneider having as a qualification his experience with that one little nurse and one doctor assumes a knowledge of a technical subject greater than that assumed by, for example, Dr. J. H. Kellogg of Battle Creek, who has under his immediate control, and for several years past, some five or six hundred nurses, both male and female, who have been trained and instructed under his system in every detail and in strict accordance with his experience and knowledge of the art of nursing, under the direct supervision of qualified physicians and surgeons, some forty in number. This is only one comparative example covering individual or institutional knowledge and experience of the subject in which Mr. Schneider assumes expertness.

I might also mention in connection with the above, the fact that Dr. W. L. Babcock, Medical Superintendent of Grace Hospital, Detroit, and Secretary of the International Hospital and

Training School Association, among others of similar authority, appeared against the bill in the Committee of the House. These two examples, only, of technical and practical knowledge covering the opposition to the nurses' bill are cited for want of space. A great many other similar examples could be furnished. In view of the above the profession will no doubt follow me when I make the diagnosis of "exaggerated ego" in Mr. Schneider's case in his connection with what might, in the language of the day, be designated "butting in" on a technical subject requiring expert knowledge and experience.

Keeping the above statement in view, it does not seem necessary that I should discuss seriously Mr. Schneider's statement that he does not see why the medical profession or any part of it should oppose the trained nurses in the passage of the Nurses' Act.

I will, however, briefly refer to his statement that "most of the principal hospitals of the state are not organized or conducted by physicians, but by governing board of citizens, not doctors, and that the Nurses Training Schools in these hospitals are officered and administered by nurses; that the curriculum of their training schools is determined by nurses and that the text books used in the training schools are written by nurses, not only that but the superintendent and supervisor and dietician of the training schools are nurses; that the lectures that the doctors give to the nurses comprised less than 5 per cent of the nurses training; that the art of nursing and 95 per cent of the training are taught by nurses."

The statement made regarding the part which physicians have in the making of the nursing art shows a very superficial knowledge of the condition Mr. Schneider attempts to discuss. The practice of nursing has been built up from and around the teachings of medical men long before and since training schools came into existence. For example, surgical technique which forms a large part of the training of nurses must first be taught and demonstrated by medical men. Every sponge and every bandage must be made and applied as he teaches and direct it shall be done. He delegates a large measure of detail work to nurses who have been trained in his methods, but this does not make him less responsible for such methods or afford any reason why he should have no voice in deciding where future methods of training are concerned.

Every remedial bath which nurses give has been first taught and demonstrated by physicians. Every surgical position, every detail of treatment must first be worked out by the medical man and taught to nurses. Nursing has been defined as one branch of medical science which has been definitely worked out. Having created this science and given it to nurses we are now asked to believe that physicians have had little or nothing to do with the training of nurses. Every nurse knows that she cannot legally practice her art independent of the physician, and if the individual nurse cannot be independent of the physician, how can the body of nurses become an independent profession?

The statement that less than 5 per cent of the direct teaching in hospitals is done by medical men can certainly not be proven true of hospitals as a whole. There are at least three training schools in Detroit in which the greater part of the theoretical teaching is done by physicians. In two schools in which three classes a week are being held for nurses two of these classes are conducted by physicians. Practically every nursing text book from which nurses study has been compiled from physicians' works and teachings. Where do all those nurses who are in charge of training schools get their knowledge regarding treatment which they impart? Moreover with every practical instruction and direction the physician gives regarding the care of his patient, he is teaching nursing. The statement by Mr. Schneider, that hospitals are not organized or conducted by physicians but by governing boards of citizens, not doctors, in such hospital's relation to training schools for nurses, is so far from being a sane statement that it is hardly worth while discussing and can be answered simply by the question: Do governing boards of hospitals composed of laymen, have either direct or indirect connection with the treatment or the method or detail of the care of patients within the hospital?

Relative to Mr. Schneider's denial that unfair methods were practiced in passing the bill through the legislature and his criticism of the published statement of the late Representative Colby. He thinks that it is improper to use the deathbed statement of Mr. Colby, who certified that he had been deceived by the friends of the nurses' bill, from the fact that Mr. Colby was a "fearless, brave and competent legislator" at the time the nurses' bill was under consideration by

the House. I cannot quite see where Mr. Colby's bravery is material to his statement of fact unless it is assumed that Mr. Colby had the opportunity to make the charge of unfairness on the floor of the House and neglected to do so. Before opportunity to make such a charge Mr. Colby was taken ill and was receiving treatment at Harper Hospital prior to the time that he learned of the deception practiced upon him and other members of the House in opposition to the bill. It will be seen, then, that Mr. Colby had no opportunity to bring the matter before the House and perhaps it was just as well for the nurses' bill and for those persons concerned in its passage that he was so disabled. Mr. Colby's statement was freely circulated in the House prior to the passage of the bill, and as early as April Mr. Schneider had been personally informed of the statement and previous to Mr. Colby's death. He made no attempt to deny it nor did the Chairman of the Health Committee of the House who was charged with bad faith by Mr. Colby. Wherein, therefore, was the latter's statement "very weak?"

Mr. Schneider further states that "no lobbying was done on the floor of the House, no Committee hearings were attended in either Senate or House that were not announced and determined upon by the proper Chairman a week in advance." How is it possible to express politely and in good nature, one's opinion of the above statement when the cold facts are a matter of accurate record? Under date of April 29th last, I wrote Mr. Schneider as follows: "The Committee afterwards gave a private hearing to the nurses and no notification was sent to the medical men, and the nurses could make any statement they pleased without dispute, and did make statements that were absolutely contrary to the exact facts. The medical men were anxious to attend this hearing, but it was impossible for them to attend, from the fact that the Committee did not notify them." No denial was either made or possible of the above charge of unfairness. Similar protests were also sent by the several members of the Legislative Committee to the Chairman of the Health Committee of the House and no acknowledgments were made of their receipt. A member of the Health Committee of the Senate (which refused to report out the bill) informs me that more lobbying was done in his Committee and on the floor of the Senate and House in behalf of the Nurses'



Bill than on any other bill before the Legislature last session and further that Mr. Schneider was the chief offender. He further informs me that in the dying hours of the Senate while he was absent on account of illness, the bill was taken from his Committee, which action could not have been successful if he had been present. We all understand how bills are passed at a time such as above if the game of politics is properly played.

Members of the State Nurses' Association having thus secured the passage of their act through questionable Legislative methods and in opposition to the medical men as represented by their state and county organizations under whom the nurses serve, what will be the inevitable result from the standpoint of the success of the act. In order to secure success of a proper Nurses' Act the latter must have the moral and active support of medical men.

The Nurses' Act as passed is supposed to protect the public from incompetent nurses and yet it is devoid of protective features. Under its provisions the overtrained, the properly trained, the low trained, and the untrained nurse of today and yesterday can all obtain state recognition in the form of a state license, including the privilege of affixing the foreign title represented by the letters R. N. to their names. After December 1st, 1909, graduate nurses of recognized training schools can obtain a license and the ambiguous letters as an affix without further qualification. Subsequent to 1912 the requirements are graduation as above and the board examination. In the meantime and hereafter all nurses who do not wish, or who are unable to graduate, and who do not care or who are not qualified to pass the board examination, are exempted from the provision of the act provided only that they do not hold themselves out to the public as possessing something either they do not value or are unable to obtain. The qualifications of a nurse, therefore, will not be under the direction or regulation of the nurses' board but in the hands of the person employing one and of the physician under whom service and recognition is obtained. Mr. Schneider states "In nearly every other State of the Union where there is a registration of nurses, nurses control their own board, and it seems to me that they are as competent to manage their own affairs as the pharmacist who controls his own Board of Registration." Let us briefly examine the result

obtained by other State Nursing Boards. New York has probably the best nurses' act of any other of the states referred to, and in addition it had in its passage no organized opposition from the medical profession and has the prestige of being under the wing of the Board of Regents. Last year an average of a little over two nurses to each training school in New York registered. Dr. W. S. Thomas, surgeon-in-chief of St. Luke's Hospital, New York, having in connection with it one of the highest grade training schools in the United States, writes: "To what extent does registration regulate the practice of nursing? In my experience not at all. The great gulf remains fixed between hospital graduates and untrained nurses in the minds of those who employ them, independently of State registration. The only benefit that I can see is that it may enhance the self-respect of the nurse who is privileged to affix the title R. N. after her name, but I have very seldom seen the title used, and as yet the public is ignorant of its significance. The time may come when it will mean much more. What effect has registration had on the problem of nursing for the sick of limited means? Apparently none. The great need for the services of nurses who are properly equipped for work in the sick room in families of limited means will never be solved, I believe, until there are plenty of training schools where sufficient education in nursing may be obtained without the large outlay of time on the candidates' part which is now required."

The medical men as represented by their organizations are not opposed to state regulation of nurses but they naturally demand that such regulation should be based upon a sound and practical foundation having in view the harmonizing of the interests affected. All attempts made by them towards this end have been futile; nurses having the proposed bill in charge stating in effect: "Nursing is a distinct and separate profession. Doctors do not understand or appreciate our ideals, we desire and appreciate their assistance in passing our bill, but deny any material interest they may claim to have in connection with nurses legislation," etc., etc. The only ideals I have been able so far to discover in the nurses' act is the creation of one class of a nurse covering the needs of less than 10 per cent of sickness requiring a nurse and the creation of a schedule of fees beyond the reach of



any one except those in prosperous circumstances; and also the trend of the Nurses' Act is towards unionism and class legislation in their worst forms. Dr. F. W. Shumway, Secretary of the State Board of Health, and a member of the lately created Nurses' Board who has been very friendly to the nurses and the act, in an address to the State Nurses' Association at Saginaw last summer states: "It is the physician who determines what the patient needs, and it is the nurse who carries out those needs during the incapacity of the patient. The needs of a sick person to have a physician's medical diagnosis, treatment and attention, and to have also a nurse's attendance, shows that the nursing profession does not stand alone and independent, but is inseparable from the medical profession. The interdependence of the nursing and medical professions is unique. And as it is the doctor who sees and judges what the requirements of an efficient nurse are, in order to carry out those needs, likewise is it the doctor who should set the standard of your training to carry out those needs. It not being within the province of your profession to say what the needs of a sick person are, it is not alone your concern what your training shall be to meet those needs. For this reason, any failure to recognize this interrelation and the part of the physician in determining the standard of your training will only bring retrogression to your profession, in-

convenience to the medical profession and suffering to the public." Dr. Shumway is evidently not entirely in touch with the nurses' ideals as above quoted.

I have no fault to find with Mr. Schneider from the standpoint of his rights as a citizen to promote legislation he thinks proper and for the benefit of the people. I do not question his good intentions, but I do certainly criticize his assuming a knowledge and expertness in a question upon which, according to his own statement, he is not qualified to render proper and safe judgment. The time will surely come when the State Nurses' Association will turn from their false (mistaken) gods and regret the consequences when too late. Like unto other opponents of the Nurses' Act in its present form, I have been accused of inconsistency in that, when the bill first was introduced some four years ago, I gave it a certain amount of support, from the fact that I sympathized with the object of the bill as I then understood it and desired to assist the nurses in every way possible. However, upon obtaining additional light, I was forced to fall back upon that part of the confessional which I have always cheerfully subscribed to, namely: "We have left undone those things which we ought to have done; and we have done those things which we ought not to have done."

B. D. HARISON.

In this period of advanced prices and increased cost of living it may not be out of place to call attention to the justice of increased fees for the doctor. With increased requirements for the practice of medicine, and with the attending increased cost in securing a medical education, it is but a matter of justice for the doctor to demand increased fees for services. We are all the more justified in demanding larger fees to keep abreast of the increased incomes of people in all other walks of life.

Another thing which should receive the serious consideration of all doctors is the question of presenting monthly statements to any and all patrons. There is absolutely no reason why doctors should not be as systematic in the presentation of statements as the merchant, and be equally as urgent in his demands that payment of indebtedness shall be reasonably prompt. Doctors have always shown and always will show leniency where leniency is due, but for those who are able to pay the rule should be that the payment must be prompt.—*J. Indiana State Med. Soc.*

There is less likelihood of injuring the deeper vessels in excising tonsils if the instrument is pressed in deeply to engage the organ rather than exerting pressure from the outside.—*Am. J. Surg.*

Hard tonsils predominating in connective tissue, are better removed by the cold snare than by a sharp instrument. The snare closes the blood nerves; the tonsillitome opens them.—*Am. J. Surg.*

An hypertrophied lingual tonsil sometimes causes much discomfort, giving a heavy, sore feeling to the base of the tongue. It may be necessary to remove it.—*Am. Jour. Surg.*

The absence of a "history" should never be allowed to weigh against the diagnosis of syphilis—especially hereditary and tertiary syphilis. The disease is often contracted unknowingly as well as innocently, as by nursing infants.—*Am. Jour. Surg.*

## Progress of Medical Science

### MEDICINE.

Conducted by

T. B. COOLEY, M. D.

**Etiology and Pathology of Chronic Achylia Gastrica.**—FABER and LANGE have made an exhaustive study of this question. The condition has been commonly supposed to result either from atrophy of the gastric mucosa, as in such malignant diseases as pernicious anemia and cancer, or from functional disturbances of the nervous mechanism of secretion. It has been the rule to assume functional nervous disorder when the malignant diseases could be excluded, and the cases have been grouped as "simple" and "atrophic." The authors believe that this classification is wrong, and that the real cause of the achylia is the same in both classes, viz., a chronic gastritis, which has usually been considered a very common disease. Their report of microscopic findings in a very considerable series of cases, both benign and malignant, is interesting, and seems to go far toward establishing their contention. The malignant cases include several each of pernicious anemia and carcinoma. Twelve benign cases were described, in patients dying of tuberculosis, diabetes, nephritis, arteriosclerosis, ulcerative colitis, etc., as well as one in which a portion of stomach was removed in an operation for ulcer. The cases were carefully observed during life, and immediately after death formol solution was injected into the peritoneal cavity to avoid postmortem changes. The symptoms exhibited by the patients varied greatly. Some had no subjective symptoms whatever, others had what would ordinarily be called very typical "nervous" symptoms, such as would be associated with a gastric neurosis, and the remainder manifested between them nearly all of the common symptoms of gastric disturbance. Excessive mucus was only exceptionally seen, and motility usually not diminished. In judging the microscopic findings, considerable effort was made to establish a normal standard by study of a number of stomachs from children with no history of digestive disturbances, and comparison of these results with those obtained from stomachs of adults. Extensive atrophy, both of the secretory and non-secretory elements, was present in some cases of each class, and was fully as marked in some of the "benign" cases as in any of the malignant. Extensive atrophy was not, however, the rule in either class, and in none of the cases did it seem general enough to account for total achylia;

while it was noteworthy that certain of the malignant cases showed practically no evidence of atrophy. In general, no distinction could be made between the findings in the malignant and non-malignant cases. The one finding common to all the cases was that of chronic inflammation of the mucosa, of greater or less severity, and longer or shorter apparent duration. The manifestations of this condition are described and discussed in detail, and illustrated by a number of very good plates from micro-photographs. These findings lead the authors to conclude that achylia is probably dependent upon chronic inflammation rather than upon atrophy or a neurosis; and furthermore, that chronic gastritis may be more common and more varied in its symptomatology than has been supposed. Some interesting points are made regarding the probable etiology of this chronic inflammation. Toxic influences may be assumed to play a part in diseases such as pernicious anemia, nephritis, diabetes, etc., while in other cases such etiologic factors as alcoholism and infectious diseases might be supposed to be of importance. It is remarkable, however, that, while in some of the cases analyzed these factors have been present, they do not seem to have had any very direct connection with the achylia, and in the majority they are not found at all. Two things are quite striking in the study of the cases. Most of the patients had reached an advanced stage of life, and the masticatory apparatus was in bad condition. The authors are not inclined to suppose that chronic gastritis with achylia is always due to any one cause, and give considerable importance to alcoholism and other toxic influences; but they seem disposed to believe, from their studies, that the chief factor may be the continued insufficient mastication and salivation of the food, the chronic inflammation thus induced often going on for a considerable period without any symptoms, until the anatomical changes finally reach the point where achylia is produced. It is suggested that if the authors are correct, the whole question of the frequency and manifestations of chronic gastritis needs to be investigated anew.—*Zeitscher. fur Klin. Med.*, Vol. 66, pp. 53 and 247.



## SURGERY.

Conducted by

C. S. OAKMAN, M. D.

**Intravenous Local Anesthesia.**—J. M. HITZROT, of New York, reports his experiences with operations on the extremities, using cocain, or novocain injections into the veins, according to the method described by Bier nearly two years ago.

The technique of the procedure is as follows: "The extremity to be operated upon is carefully bandaged with a soft rubber bandage from the distal end to a point sufficiently high to allow free access to the field of operation. This must be so done that all the blood is squeezed out of the extremity and kept out by a broad rubber band above the field of operation. A second rubber bandage is wound about the extremity below the field of operation, enclosing it between the upper and lower bandages. Under infiltration anesthesia a subcutaneous vein, close to the upper bandage, is exposed, if possible by a vertical incision—if not, a transverse one will expose a vein without difficulty. The vein is freed, two ligatures passed beneath it, the upper ligature tied and the vein cut across. An ordinary metal infusion cannula is then passed into the lower (distal) end of the vein and tied over it, firmly closing the vein about the cannula. Through this cannula the operator injects from 50 to 100 c.c. of 0.5 per cent. novocain solution in a direction opposite to the normal blood current. Anesthesia results in from 5 to 10 minutes, due to the passage of the novocain solution through the vein wall, and is complete. The cannula is left in situ; injection solution must not escape."

When the operation is completed and before closing the wound, he washes out the veins with warm salt solution. As an additional precaution the upper bandage is loosened sufficiently to allow blood to flow through the arteries and thus wash out still more of the novocain solution. After the blood has flowed for a few minutes the bandage is again tightened, the wound sponged dry, and closed in the ordinary manner, the dressing applied and the rubber bandages removed. In amputations the line of the incision passing through the injected area makes the washing-out process unnecessary.

The anesthesia lasts from 5 to 15 minutes after washing out the veins. In nervous individuals Bier finds a preliminary dose of morphine and scopolamine satisfactory.

When the fluid is first injected the subcutaneous veins can be seen to dilate, but soon

they contract again, as the solution passes through their walls into the tissues. The author selects three of his cases for detailed description—an amputation of the leg for tuberculosis, a resection of bone for hallux valgus, and dissection of a tendon sheath of the forearm for tuberculous tenosynovitis. Cocain was used for one of these, novocain for the other two; the latter is recommended, because it can be safely sterilized by boiling and is less toxic. The patients feel absolutely no pain during any stage of the operation; there is no bleeding, and none of the disagreeable after-effects of the general anesthetic.—*Annals of Surgery*, Oct. 1909.

**Non-Operative Cure of Hernia.**—A. SOLDUGA reports the results of truss treatment in 1,100 males, observed for three years after prescription of truss. These cases were divided as follows: 1,036 inguinal hernias, almost all oblique and the majority congenital; 55 femoral; 4 supraumbilical, through the linea alba; 3 post-operative: 1 umbilical; 1 through Petit's triangle. The cases which he finds incapable of non-operative cure are the following: Those which are irreducible in whole or in part; those accompanied by ectopia testis; those associated with shortening of the canal; direct hernias of all kinds. Of the 1,100 cases reported, the author found apparently perfect cure by truss within three years, in 4 per cent. of all those not included in above, that is, in 4 per cent. of all small and easily reducible oblique inguinal hernias, all of the patients between the ages of 20 and 24.

The truss, in order to be of benefit, must compress the whole canal, closing the internal as well as the external ring; this pressure, opposing the intra-abdominal pressure, causes a certain amount of irritation and leads, in the author's opinion, to a strengthening and thickening of the peritoneum in the canal, and in rare cases causes a mild adhesive peritonitis with total occlusion and cure. In direct hernias, on the other hand, no such counter-pressure is possible, the intra-abdominal pressure forcing the hernial mass out as a wedge, and tending to open the tract wider; the same applies to those oblique hernias in which there is shortening of the canal.

Abstracted from *Revista de Medicina y Cirujia*, May, 1909, in *Surg. Gyn. and Obst.*, Nov. 1909,



## PEDIATRICS.

Conducted by

R. S. ROWLAND, M. D.

**Infection of the Urine and the Urinary Tract by *Bacillus Coli* in Infancy.**—MORSE says that, while infants do have ascending infections of the bladder and kidneys from urethritis of various sorts, severe inflammations of the bladder from stone and secondary pyelitis and pyonephrosis, tuberculosis of the bladder and kidneys, and all the other diseases of these organs which occur in adults, they have them extremely rarely, so rarely, in fact, that they may almost be regarded as among the curiosities of medicine. Bacterial infection of the urine and urinary tract with the presence of pus in the urine, associated in some cases with epithelium of various sorts, and occasionally with casts, is, however, not at all uncommon. It is usually not recognized, however, as most physicians are not familiar with the condition, or if so, do not bear it in mind. In the vast majority of cases the infection is with the colon bacillus, although the bacillus lactis aerogenes, the typhoid bacillus, bacillus proteus vulgaris, and several others have been found in rare instances. The condition has been described by various authors under various names, bacteriuria, pyelitis, cystopyelitis, colicystitis, pyelonephritis, according to the individual author's idea of the location of the infection, their opinions apparently having been based on the microscopic appearances of the urine. Because of the difficulty of determining the exact seat of the lesions, the author prefers to speak of this condition as infection of the urinary tract by bacillus coli.

It is evident from a consideration of the literature that the mode of infection is not always the same. MORSE thinks that in the majority of cases in girls the infection is through the urethra, while this route is very unusual in boys, and then only when there is some evident lesion, such as phimosis, causing stasis. In most cases in boys and a fair proportion among girls, the infection is probably transperietal, while in both sexes it is occasionally hematogenous.

In the vast majority of the cases there is nothing whatever in the symptomatology to call attention to the urinary tract, the symptoms being merely an elevation of temperature and

those common to all febrile disturbances in infancy. In most cases the diagnosis can only be made by the examination of the urine.

Only one of the writer's 50 patients died. In most cases, however, the duration was long, sometimes several months.

In regard to treatment, MORSE thinks local bladder medication is of little value and not indicated. He says alkalies are most likely to do good and should be tried first. If there is no improvement while they are being given, hexamethylenetetramin should be used. If there is still no, or very little, improvement and the case is becoming chronic, autogenous vaccines should be tried.—*American Journal of the Medical Sciences*, Sept., 1909.

**The Early Symptoms of Anterior Poliomyelitis.**—LAFETRA has studied 63 cases of anterior poliomyelitis to determine the more important early symptoms. Vomiting occurred in 25 cases, as a rule only at the time of onset. Restlessness and irritability were common, and definitely noted in 37 cases. Tendon reflexes were absent in the paralyzed limbs in 16 out of 20 cases and present, but sluggish, in three. In no cases in the whole series were tendon reflexes exaggerated. Cough, tonsillitis or sore throat was noted in only six cases. Delirium was present in but two cases. Convulsions in four cases. Rigidity of the neck occurred in 11 cases. Pain and tenderness in the affected limbs was present in 32 cases. Pain in the muscles in five cases, on movement of the joints in four cases. The latter is important as possibly confusing the diagnosis with cerebrospinal meningitis and neuritis. The paralyzed limb was flaccid in 58 cases. It was spastic and rigid in only five cases. Paralysis came on early. It occurred on the first day in 24 cases; on the second day in nine cases; on the third day in three cases; after two weeks in four cases. Paralysis was occasionally noted in the muscles of the neck, face, back and abdomen. Also paralysis of the bladder and general anesthesia. Leucocytosis varied from 13,000 to 20,000.—*Archives of Pediatrics*, May, 1909.

## OPHTHALMOLOGY.

Conducted by

W. R. PARKER, M. D.

**The Etiology of Trachoma.**—PROF. DR. R. GREEFF, by using the Giemsa method of staining, was able to obtain a certain characteristic result in trachoma in every case. In describing them he says: "The bodies I found were very regular, round, cellular inclusions, which were much smaller than the smallest known coccus. They stain intensively, sometimes violet, sometimes reddish or blue, with Giesma diluted with aniline stains, and not at all with Gram. They are surrounded by a distinct clear zone. With the strongest powers of the microscope, one observes that they are not quite round, but a little oval or grouped in pairs or in masses. If intracellular, they lie close to the nucleus."

The formations are found in the epithelium, in the discharge, and in the pressed-out follicles.

"The masked form is of irregular shape, at times oval, at times rounded, in the beginning very small, but gradually growing until it takes the form and the appearance of a raspberry." While some of the bodies are surrounded by a clear mantle, in others it is incomplete or absent, the mantle being characteristic of one stage only. The granules may be free between the cells and in the discharge, where they are seen congregating in large numbers.

The secretion of the conjunctival sac is taken in the customary manner with a platinum loop and smeared on the cover either by superficially scraping the epithelium with the edge of the cover glass or with a scarificator.

"The preparation is allowed to dry in the air, then fixed for twenty to thirty minutes in absolute alcohol. It is then allowed to float for from six to nine hours (if possible at a temperature of about 37° C.), with the smeared side down, upon the staining fluid, which is a mixture of 12 parts of Giemsa's eosin solution (2.5 ccm. of the French 1% eosin solution in 500ccm. of distilled water), 3 parts of azur II (0.8 to 1.000).

The author believes trachoma involves more than the epithelial cells for the following reasons:

1. We know, clinically, that the trachomatus process goes very deeply into the tissues, intruding even into the tarsus, and, finally destroying it.

2. As I observed in cases in which the trachoma bodies are frequent, they absolutely disappeared from the surface after a few days of treatment. But they reappear immediately if the treatment is stopped. This proves, I believe, that, although they were absent from the surface, they still remained in the tissue itself, making their reappearance on the surface again and causing a relapse.

3. Dr. Di Santo, an Italian physician working in my laboratory at the time, succeeded in obtaining the bodies in sections, so that now, through his work, we are able to localize the bodies. We do not see them in the epithelium alone, but also in the subepithelial tissue, in the lymph spaces beneath it, in the cells of the follicles (the lymphoid and the so-called Leber's cells), and between the cells.

These formations never occur in conjunctivitis simplex, follicularis, diphtheritica, gonorrhoea, vernalis, etc.

On the other hand, we found these bodies in every recent case of trachoma in Posen, Berlin, Königsberg, and in the Rhine Province. They have now been found, further, by Halberstadter and Prowazek in Java, Mijaschita in Japan, Leber in Austria, v. Krudener in Russia, and Finlay, Cuba.

It is certain that they are a constant characteristic of trachoma.

The bodies were different from all known cell degenerations; but must not be confounded with the eosinophile-granules in the leucocytes. The bodies have, no doubt, some resemblance to those described by Negri and Guaneve.

But we observe them growing in the cells and see them vanish under treatment; therefore, for this and for other reasons it is very probable that they are a living agent.

The trachoma bodies are certainly not bacteria, but are more closely allied to the protozoa."—THE OPHTHALMOSCOPE, Sept., 1909.



## ORTHOPEDIC SURGERY.

Conducted by

WILLIAM E. BLODGETT, M. D.

**The Surgical Treatment of Athetosis and Spasticities by Group Isolation.**—SCHWAB and ALLISON consider athetosis, which is the involuntary useless moving often seen in the hands of patients suffering from spastic paralysis, as the first step toward permanent spasticity, the abnormal nerve impulses not being frequent enough to produce continued contraction, or permanent contracture, which more commonly occur in the lower limbs. Treatment therefore of both of these conditions should be based on the same principles, i. e., the restoration of muscle balance by weakening the contraction of the more powerful muscles, and thus giving opportunity for better function and consequent strengthening of their overwhelmed antagonists. The writers find that treatment by the standard methods now in vogue of tenotomy, myotomy, muscle or tendon transplantation and nerve anastomosis, is unsatisfactory. They continue:

The cause for lack of permanent improvement may be summarized as follows: First, in all the methods used the nerve supply, which is the conducting structure by which the abnormal impulses are brought into action, remains untouched. Second, in nerve anastomosis, there is simply a transference of the path along which these abnormal impulses reach the muscle group, granted even that the anastomosis is successfully established—a matter of considerable doubt. Tenotomy and myotomy, besides being merely an attack upon the end result, have the additional disadvantages of being but transitory in their benefits, the condition being all too frequently reestablished. Furthermore, by the necessary supplemental treatment, i. e., plaster-of-paris bandages or fixation apparatus, not only are the local antagonists made much weaker, but also the whole muscular antagonism of the extremity is seriously impaired by the confinement in bed and the tight bandaging necessary. The same criticism holds true for muscle transplantation in spastic cases; in addition the scope of this method is necessarily limited to a narrowly selected group of cases, in which only a single muscle can be utilized.

In consideration of these facts we have been led to devise a method which we shall refer to as muscle group isolation. This implies the isolation of the muscle or group of muscles which are at fault in the production of contracture, deformity or athetosis. It is made effective by cutting off from the central nervous system the connection along which the abnormal

impulses, active in causing spasticity or athetosis, are transmitted. This is done by a direct attack upon the nerve itself, by isolating it, and injecting it with alcoholic solution (30 to 60 drops of 80% solution). There has resulted in the cases an immediate paralysis of the physiologically stronger group of muscles without interfering with the free muscular use of the antagonists. At this point physiological exercises planned to further strengthen the antagonist may be used.

In the selection of a case on which to try this method for the first time, a simple case of athetosis, in which the ulnar nerve was regarded as being primarily involved, was chosen, for the reason that the operation would be neither difficult nor dangerous. Inasmuch as this case presented a median nerve complication, it was an easy matter to inject the median nerve at a later time. Our experience in this instance encouraged us to attempt a more complicated operation on a case in which the spasticity was both more general and more intense. Here the condition was bilateral adductor spasticity of the lower extremities in so-called Little's disease, requiring an isolation and injection of the obturator nerve, which supplies the adductors of the thigh. For the purpose of this operation it was necessary to discover the nerve above the division into its branches, that being the necessary point for injection. The fact that this nerve is a motor nerve and supplies a most powerful muscle group, namely, the adductors of the thigh, the gracilis, pectineus, adductor longus, brevis and magnus, and that this group is all important in the production of cross-legged progression, made it a most favorable object for testing the value of this operation.

In attempting to summarize the results of this study, we realize the tendency so difficult to overcome of drawing conclusions from insufficient experience. We have only in mind, therefore, tentative conclusions and suggestions based upon them. As stated in the beginning, this paper is to be considered as preliminary to a more complete study of the subject.

We believe, therefore, that we are justified from our experience in advancing the idea that muscle group isolation is a feasible surgical procedure and that it makes physiologically planned exercises more directly effective in the treatment of athetosis and spasticities.—*The Journal of Nervous and Mental Diseases*, Aug., 1909, Vol. 36, No. 8.



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